THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—Liebig.

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Manures.

The following remarks are taken from a Lecture on the application of Chemistry to Agriculture, delivered by J. C. Nesbit, at Farnham, the latter part of last year; and we are indebted for it to the British Farmer's Magazine, for the fourth month last.—Ed.

Many persons, whose farms are near the sea, import fish on their land. These fish contain abundance of phosphate of lime and magnesia—bone dust,—a very important ingredient; and they contain ammonia, carbon, a little salt, and potash. They are what is called a quick manure; that is, they act quickly; but if you put them year by year by themselves, without applying something more solid, they would not continue to produce a good effect. When those who are near the sea use fish, I would advise them to mix them with other manures, to prevent their quick action from deteriorating the value of the land, by taking more from it in the year than it is capable of affording without injury. There is another most general means of introducing manure on land, though it is not generally known as such, viz., by feeding cattle with oil-cake. This is not generally regarded in that light; but still, it is neither more nor less than a means of manuring land. The oil-cake being composed of linseed which has been pressed from the oil, still contains considerable quantities of carbon and hydrogen, which are derived from the air, and of nitrogen, and forms a very good food for animals; they can derive from it a large quantity of fat, and some flesh; and that which is given out from them as manure contains large quantities of the mineral ingredients, together with a very considerable amount of ammonia. Well, the mineral ingredients and ammonia thus furnished by the oil-cake, is one way of manuring the farm. Oil-cake is very expensive, and it would not pay to feed cattle on it—at least, so many farmers have told me—were it not for the manure. They feed the animals because the manure which they get is so valuable. They tell me, "We sometimes lose £100 or £150 a year by our bullocks;" "but we must feed bullocks," they add, "because we thus manure our crops." When I was lecturing at Maidenhead, and had occasion to speak on this subject, I had to disabuse the minds of certain gentlemen as to the absolute necessity of submitting to a loss for this purpose; whether I was right or wrong you will be able to judge. A gentleman told me last spring, when you will recollect there was a great deal more turnips than the sheep would feed off, at least

in that part of the country, that he would give any one £2 an acre to send a flock of sheep to feed off his turnips. It struck me that this was too much; and I said to him, "Do you expect to derive anything from their feeding on the turnips?" He said, "Certainly." I rejoined, "In my opinion the sheep can give you nothing but what the turnips contain; the turnips will only pass through the bodies of the sheep. Do you not think that £2 spent for guano, with the turnips ploughed in, would give you more manure than £2 paid to feed off sheep?" I had a strong argument to maintain in the presence of a great number of gentlemen. The gentleman, of whom I have spoken, said, "If you will come to me to-morrow morning, at my farm, I will convince you." I replied, "I will be with you." I went over the farm in six hours; and that day I gained two converts, the gentleman and his son; and I believe they are now two of the first agriculturists in the neighbourhood. I had time to explain my views to them, and they soon saw that if you could get the turnips to rot in the ground, and were then to apply £2 worth of guano, you would get very much more than you could obtain by feeding off a certain number of sheep merely on the turnips. Well, then, I say that under certain circumstances it may be profitable to you, instead of feeding sheep, to use a certain amount of guano and other matters which may be put on the land, or to plough in your crops. It is a money question entirely; if we can obtain what we want for a pound less in one way than in another, it is necessary, in a commercial point of view, to get that which will cost the least. I do not call upon you to go and try a whole farm full of experiments of this kind; but the next time you are placed in the position which I have described, try an acre or two; and if you find, subsequently, that the crops are as good or better, you will have lost nothing by the experiment, and you will be enabled from your own experience, when placed in similar circumstances again, to do without the advice of a chemist. You see, in fact, with reference to the oil-cake, that the farmer imports the produce of one farm to put on another. Now there is another valuable manure which is well known, though it has only been recently imported. This manure, like all other manures, is derived from the vegetable world. Our rivers are pouring down, year by year, from the surface of the land, bone dust and potash and soda and ammonia, and a thousand things besides, into the ocean. All the soluble matters of the earth's surface are poured down by the rivers and rivulets into the sea; not, gentlemen, to exist there for no purpose at all. As large and extended a vegetable kingdom exists under the surface of the waters as above them, and the source of animal life in the sea is the same as that which sustains it on land. The fishes feed and browse on the sea-weed, as we call it, and on other plants belonging to the vegetable kingdom in the ocean. The carnivora of the fish kind feed on these fishes, as the fish feed on vegetables; and the birds of the air, having fed on fishes fed on the vegetable kingdom of the sea, deposit their food in places to which they resort. Now, the excrements of these birds —the birds themselves having fed on fish, which contain large quantities of every element of manure—must afford valuable ingredients. We have immense quantities of these excrements annually deposited all round our own islands, and wherever it can be collected, it is a most valuable manure; but in this country the rain falls in such abundance as to wash away, in the winter, nearly all that is deposited by these sea birds in the dry weather. There are localities in the earth, however, where the rain falls so seldom, or in such small quantities, that it acts scarcely at all upon these excrements, and they go on accumulating till they grow up to many feet in thickness, particularly in those islands which are scarcely ever visited by man, whither the birds resort in immense numbers. Well, now, the excrements of these birds being thus collected in a dry latitude, and consolidated for many years, until they almost have the appearance of a rock, contain almost every essential ingredient for the farm, though not, perhaps, precisely in the proper quantities. They contain large quantities of ammonia. Ichaboe guano contains from eight to ten per cent.; Peruvian guano, ten, twelve, fourteen, and even sixteen per cent.; it contains, besides, phosphoric acid, lime, magnesia, potash, soda—the two latter in the same quantities, not more than two and a half, or at the greatest, four per cent. Now, as a stimulating manure, guano is a very good thing to apply to land. In all cases where land is heavy, and not apt to germinate as it ought to do, an application of guano will stimulate it to a very considerable extent, and cause the plant to germinate and rise quickly. But if you do not supply the plants with that of which the guano is deficient, for their increased growth, it will, in the long run, do more harm than good. The guano contains the chief acting part of ammonia and bone dust; but if you do not supply the others, and if the land is not capable of supplying them, you may obtain a bad result from the application of guano. It is a well known fact that the

continued application of guano is attended with bad results. In the vicinities of the parts from which guano comes, near Peru, there are places which become perfectly sterile from its use; but some of these places have been made fertile again by the application of nitrate of soda; and at the present moment there is an exchange going forward of guano for nitrate of soda in the countries which produce these substances. There are certain places in South America where nitrate of soda is found, as we find an efflorescence on the walls of new buildings. Guano is exported from one place, and nitrate of soda from another, and we find the exchange acting in the most beneficial manner. Where guano has been acting, the application of nitrate of soda is found to supply some portion of what is wanted. Guano may be considered as a sort of representative of animal manure. Again, greaves and rags, and all such things, form an exceedingly good manure. These contain large quantities of nitrogen, and are capable, by their decomposition, of giving large quantities of ammonia. They are exceedingly good for those plants which require these substances, such as wheat and hops, upon both of which they are known to produce the best effects. But the application of these alone will bring about a sterility of the soil, which is not desired by the farmer, who wishes to gain year by year, and not one year alone. Now, rags and other things containing large quantities of ammonia are very useful where mineral ingredients have been supplied to a certain extent. I have analyzed the mineral ingredients of the rag ashes, and I found that they contain 10 per cent. of mineral matter, and in that 10 per cent. is a large quantity of bone dust. The furnishing of ammonia to the soil constitutes, perhaps, one of the principal features of these manures. Now, as I before intimated, we may reckon all the animal manures—such as shoddy, horns, hoofs, trotters, rags, &c.—as acting similarly to guano. The only difference is, that the guano acts more quickly, because the ammonia is in a far more soluble state, and is capable of being carried into the soil by the first shower of rain. Now there are other manures besides these; there is bone dust or phosphate of lime. How is it that bone dust has been found such a splendid manure! Bones have been used in almost all quarters with almost unqualified results; there are very few places in this empire where they have not been found useful. I have heard of their not having been very useful on the Malm rocks—upper green sand;—I have heard of two or three cases in which they have been found of no service there; but, at all events, on general soils the bone dust has been found of great use. It is easy to account for this. I have mentioned to you the action of the rain, which is such that, supposing one pint of water to dissolve a grain per acre, 840 lbs. per acre are washed away every year. But you will recollect that, in addition to this, until very lately the plants were taking bone dust constantly from the ground, and thus providing the material for the bones of animals, without any restitution being made to the land. As for man, all his bones are, according to custom, deposited in certain places, and never return to the land; and until recently, the bones even of the other animals were never restored to the soil. The consequence was, that soils generally became impoverished in bone dust. Bones consist of certain kinds of animal matter called "gelatine" and "fat," and of a portion of mineral matter called "phosphate of lime and magnesia." It is a very singular thing that bones deprived of the animal matter act more quickly than the fresh bones. The fact is, if you take some bones and bruise them fine, and then take others and burn them, the latter acts quicker than the other. The fat of bones prevents atmospheric action on them; and you know perfectly well that unless they are soluble they are of no use. They are of no avail to the farmer if they are not soluble, and the more soluble they are the better. The burnt bones are, therefore, acted upon much more quickly than the others, though we have a loss of the animal matter. It is to Liebig that we owe the suggestion of making bones much more soluble than even burnt bones. The main fact had been long known. The common method of making phosphoric acid formerly was to take a certain quantity of burnt bones, and to mix them with a certain quantity of oil of vitriol, by which means the phosphoric acid of the bones was set at liberty. The bones consist of phosphoric acid and lime, with a little magnesia; the sulphuric acid seizes upon the lime, and forms sulphate of lime, or gypsum, and liberates the phosphoric acid. Phosphoric acid is quite soluble, as soluble as sugar.

Now that is just the thing which the mind of Liebig applied at once to land. "If," said he, "we can just do the same thing for the land, the first shower of rain will wash this phosphoric acid down the land; it will there meet with lime, magnesia, and other things, and form phosphate of lime and magnesia, but in a state of the most minute division, so that it will be acted upon by the smallest quantity of water. Now, without any exception that I am aware of, where bones and sulphuric acid have been tried, it

has been found beneficial for the turnip crop. Turnips have been obtained in abundance by the application of this manure; I have never yet heard of a failure. In almost all soils there is lime, so that the phosphoric acid will find something to neutralize it, and cannot injure the plant. Turnips find the bone dust prepared for them in the minutest state of division. This manure is also suitable to other root crops. In a general way, you export no turnips from the land; you would take more from the farm land were you to export the turnips year by year. In the latter case, you would take away such a large amount of potash and soda, and other things which the turnips require, and which the bones do not give, that I think you would find it very difficult to grow them year after year, without a very considerable application of other manure. That question may be settled very easily; but in the case of the ordinary turnip crop, it seems pretty well ascertained that if you apply phosphate of lime, you can grow the turnip; and every one knows that if you can grow the turnip you can get the three subsequent crops. Now, with respect to lime, that is an excellent manure. In the analysis which I made of the hop, I found lime, more particularly in the coarser hops. In all cases, I find that lime has done good to the hops, but great care ought to be taken in applying it. I have known parties apply it in a way which was certain to do mischief; they have applied it with manure; and when lime is applied with manure, it must drive off all the ammonia contained in it. I have here samples of manures containing ammonia; there is some beautiful Peruvian guano—exhibiting a small glass bottle containing the substance. I will just show you the effect of mixing lime with this. A friend of mine in Kent, who had found lime good for his hops, having heard that guano was a good manure, mixed the two together, and thus drove out all the ammonia. My opinion is, that the best plan is to apply the lime first to the land, and the manure afterwards, so as to let the lime become what is called mild by the action of the air, and after that to apply the manure."

Scraps for the Economical.

If you would avoid waste in your family, attend to the following rules, and do not despise them because they appear so unimportant—"many a little makes a mickle."

When ivory-handle knives turn yellow, rub them with nice sand paper or emery; it will take off spots and restore whiteness.

Silk pocket handkerchiefs and deep blue factory will not fade if dipped in salt water while new.

Spots in furniture may be easily cleaned by rubbing them with a flannel wet with the same thing that took the colour—if rum, wet the cloth with rum, &c.

Lamps will have less disagreeable smell if you dip the wick yarn in strong hot vinegar and let it dry.

Clean a brass kettle before using it for cooking, with salt and vinegar.

If you wish to preserve fine teeth, always clean them thoroughly, after eating your last meal at night.

Linen rags should be carefully saved; they are useful in sickness; if dirty or worn, wash them or scrape them into lint.

Vials which have been used for medicine, should be put into coal ashes and water, boiled and suffered to cool before rinsed.

Cotton, wet with sweet oil and paregoric, relieves the ear-ache very soon.

L. M. Child.

Improvement of the Smaller Fruits.

What can be done for the raspberry? Perhaps less than for most other kinds of small fruit. It is not clear that the flavor of the raspberry could be at all improved. There is probably not much to be gained in the way of imparting to it variety of appearance. The best varieties at least possess the property of size, in a considerable degree; and though this might be enlarged upon, yet it does not seem to strike one as a very necessary change; some of the present varieties, when well grown, may indeed be considered large. In what way, therefore, could our present race of raspberries be improved on?

There does seem to be one point at least on which an improvement might be wrought. Notwithstanding that the fruit is held in such universal estimation, the raspberry season is but of short duration. True, there is a double bearing variety, as it is called, which fruits later than the other kinds: this is valuable, so far, in itself: but we also take it as the earnest of something further. It is, in fact, just the thing to work with; and we have no doubt that a little well-directed energy would very shortly produce from it varieties which would materially prolong the raspberry season.

What can be done for the gooseberry? That the gooseberry cannot resist the power of improvement to which we are referring, there is ample evidence in the production of the prize varieties for which Lancashire is famous. But the Lancashire growers breed only for size; that quality they have indeed

stamped upon the fruit in a very remarkable degree; but this of itself is not enough for the dessert, nor yet for the culinary department; quality, not less than quantity, is a necessary recommendation in the garden of the connoisseur. Gooseberry growers may, therefore, busy themselves to impart the flavor of the choicer kinds to the large show varieties that are now chiefly raised; and in doing this, they will have effected an improvement worthy of the effort. But why not also prolong the gooseberry season? It is fully short enough. Some of the early kinds might, in time, be pushed a little nearer the vernal equinox than we now have them; and this early race would not be injured by increased size, and more concentrated flavor. Then, again, with the late varieties. Might not new forms, later than any we now possess, be obtained? And would not, in this case also, additional size constitute a further improvement? These results are only waiting the well-directed efforts of some zealous individual to meet a full realization.

What can be done for the currant? We see no reason why bunches of currants should not, for size, bear a closer comparison than now, with bunches of grapes. The thing is by no means so ideal as it might at first seem to be. Were the berries double the size of those of the largest of our present varieties, and these, borne, as we now see them, occasionally, from a dozen to a dozen and a half in a bunch, we should have a very respectable approach, if not to the clusters of Eschol, at least to the more ordinary range of our cultivated grapes. Some of the varieties bear fruit which is less acid, and less woody-tasted, than that of others: these qualities would, of course, be required in the new and improved series. Then, again, currants are a fruit which it is often considered desirable to keep for some time—some months indeed—on the trees. It would be worth attempting to obtain varieties which would hang better than our present varieties do. On the subject of improving the present varieties of currants, we have recently met with some judicious remarks by Mr. Tomlinson, in the *Midland Florist;* and as they bear directly on the subject before us, we will introduce them here:

"I have for years been an extensive cultivator of currants, selling the produce in the large town in my immediate neighbourhood, and I find that, though the red grape is a large and fleshy fruit, still it ripens unkindly, which is a great drawback to its more extended cultivation. The old long-bunched red is, with me, far preferable; but I see no earthly reason why this fruit might not be improved in a very great degree. Would it not be possible to raise a '*currant show*,' on the principle of the Lancashire gooseberry shows? and if this could be carried out, and an inducement given to raise fresh varieties from seed, I make no doubt that we should speedily have currants double the present size, and much longer in the bunch; and I am sure that nothing would pay better than improved varieties of both black and white, as well as red ones. The plant comes early into bearing, and any improvement on the old sorts would speedily supersede them, as the black Naples is now displacing the black grape.

"I heard of several new sorts, which I purchased last autumn, and am now growing them, to test their respective qualities. Of course, I cannot, the first season, decide, as I should wish to have my plants well established. The sorts purchased are:

"1. *The Gondouin Red.*—A continental variety, with peculiarly red wood and large foliage, very distinct in habit.

"2. *The Cherry Red.*—Also from the continent. This has extremely large foliage, and stout shoots.

"*May's Victoria.*—This, I see, has been mentioned in several publications as a large and very prolific variety, and would, doubtless, be a fine sort to save seed from.

"*Haughton Castle* (Red).—This was raised in the far north of England. Its character to me was *large and late.* It appears to be an erect grower, and has abundance of fruit, which is of good flavor, though, from the circumstance of the trees being planted only last autumn, not so large as when they become established.

"5. *Goliath.*—I have also received with this a first-rate character as a *good* red currant; and if any induction is to be made from its luxuriant mode of growth, I should fancy it would respond to its name.

"I have selected some of the largest berries on both Goliath and May's Victoria, the seeds of which I intend to sow; and should these prove large, I will again sow from the largest. By this means, in a series of years, I hope to arrive at the height of my ambition, namely, to produce currants as large as small marbles. Now I am confident there is nothing Utopian in all this; and I am certain that, if a few persevering individuals were to devote their attention to the improvement of the currant, it would be attained in less than ten years."

Once more we may state—and we repeat it, because it is a rock on which very many split—that experiments of this kind are the better for being conducted on a limited scale. One case of cross-breeding, carefully wrought

out, on correct principles, is more pregnant with really useful and valuable results, than a thousand promiscuous ones, or a hundred carelessly prosecuted; while, of course, the labour and trouble attending the experiments becomes lessened a hundred or a thousand fold. Those, too, who have time and opportunity for more extensive operations, should take care to multiply carefully—instead of carelessly—conducted experiments.—*Gardener's Journal.*

Agriculture in Scotland.

To the Editor of the Western Times:—

Sir,—A few weeks since I troubled you with an account of the method adopted in the southern counties of Scotland, of paying farm labourers, &c.; therefore have again taken the liberty of trespassing on your valuable columns, by giving your agricultural readers some idea of the manner in which farming operations are conducted in the Lothians of Scotland or counties of Haddington, Edinburgh, and Linlithgow. I shall not enter minutely into details: those who wish to be more fully acquainted with Scotch farming should visit the country; and whether they do so on a tour of profit or amusement, they will be most amply repaid.

The Lothian farms consist each of 200 to 500 Scotch acres, the Scotch acre being one-fourth larger than the English statute acre, therefore I shall limit my remarks to the current acre of the Lothians. A farm of 300 to 500 acres is by common consent the utmost which one farmer is thought capable of managing. The farm buildings are small, compact, and situated near the centre of the farm, and have always a steam engine of six to eight horse power for threshing, and other purposes. At the entrance of the farm-yard is the dwelling of the grieve, or bailiff; for every farmer keeps a bailiff, who superintends everything on the farm, and is cognisant of everything that goes in or out of the farm buildings. I found the grieves universally clever, acute, and sensible, and their minds open to what was passing in the world beyond the limits of their own immediate neighbourhood: this speaks well of what education has done for the peasantry of this part of Scotland. The farmers themselves are men of much superior education, manners, and style of living, to the equally wealthy ones of the farming counties of England: they are all of most hospitable habits. Few of them are without a handsome phaeton for the use of the female members of their family. One feature throughout the Lothian farms may be remarked—*a great uniformity in the quality of the crops.* Not, as elsewhere, here a good farmer and there a bad one, here a failing crop and there a middling one, and here again a finer one, but nearly all the same; showing that farming is there reduced to a science, leaving nothing uncertain but the seasons. The farms are divided into fields of 20 to 50 acres each, the hedges are clipt low and thin, and the ditches covered in, so as to occupy as little space as possible. There are no trees in the hedge-rows, and few furrows in the land; and thus, between one thing and another, the entire area of the farm is made productive, and the expense of fences and gates is reduced to a minimum. Another thing worth noting is, that permanent grass, either as meadow or pasture, is unknown, or nearly so: the only hay or pasture is derived from artificial grass sown in the regular rotation of crops. The rent of the Lothian farms is from £3 10s. to £7 per acre, and these high rents the farmers not only pay *but thrive upon.* They are enabled to pay these rents and thrive, partly *by the heavy crops arising from skilful cultivation*, and partly by *economy of management* in every department. Actual wages, however, are as high in England, viz:—10s. to 11s. a week for a common labourer, 12s. for a ploughman, and 9d. a day for women—ten hours to the day. As to the great amount of produce, it must be remembered that *all the land is under the plough.* Five quarters of wheat, ten of oats, seven of barley, and from thirty to thirty-five tons of turnips, are reckoned a good average to the acre.

Economy of management is shown in the division of employment confining the attention of the farmer to as few points as possible, in a due rotation of crops, so as to have no land lying idle or unproductive, and in the use of machines and horses instead of manual labour, whenever circumstances admit of it.

All the Lothian farms are held on nineteen years' leases, and the rents wholly or partly corn rents, rising and falling with the yearly fluctuations of the price of corn. Without a long lease, the farmers would not lay out their capital in the free manner they now do, and with a long lease they feel independent of their landlords, more as if they were the actual proprietors. In consequence of this independence and part ownership, as it were, of their farms, men of much superior rank, education, and capital engage in the business of farming than is the case in England, or, indeed, *than ever will be the case* in England under existing circumstances.

The foundation of all improvements in the Scotch farming is the system of *thorough*

draining; and so essential is this considered, that most of the land is deemed unworthy of being farmed at all until it has undergone this operation. The drains are made at regular distances, from 15 to 30 feet or more apart, according to the nature of the soil, and from 24 to 30 inches deep. The general course of cropping in the Lothians is—wheat after summer fallow; turnip, barley, seeds down for one, two, or three years as circumstances vary; oats. When the land is very stiff, a crop of beans and peas is taken.

I have thus endeavoured to give, in a somewhat unconnected way, the results of my observations on the Lothian farming, where high rents, high profits, and a well paid and contented peasantry are all seen combined in a pleasing union. It is an interesting question, but one I am not going to enter upon, how this improved system of cultivation can be introduced into England? I am inclined to think the superior and more practical education of the Scotch has been at the bottom of the improved state of things. Education has given the knowledge which has enabled them to apply their capital with success, and to extract from the land owner the long lease, which enables them to invest their capital with safety as well as success. Trusting these few remarks will be found worthy a place in your paper,

Believe me, yours truly,

R. S. Hews.

Broadclist, February 17th, 1847.

Grafting on the Mountain Ash.

The grafting on the mountain ash stock has been practiced for the last twenty years, and about six or seven years ago was brought prominently before the public in several of the English papers. The result of every experiment went to prove that the process on the mountain ash would only succeed for seven years, but even in that time the produce amply repaid for the labour, and that all that was necessary was to re-graft and the produce was renewed. Experiments were also tried upon the common ash, the willow and others, but the thorn was the one that gave the greatest satisfaction, for on it every variety of fruit succeeded. The mountain ash and the thorn are also grafted to a good extent in Nova Scotia with perfect success. The thorn can be seen there with pears, cherries and apples upon the same stock, and the farmers in that province go round and graft all the thorns upon their lots. To what an extent could this plan be carried in the States, for not a single graft need be wasted when *stocks* can be found in such plenty. In England where stocks are plenty—the quince stock is generally preferred for pears, for this fruit does not succeed so well on its own stock.

The pear delights in deep vegetable mould *interval* soil by the sides of rivers, or in low well drained situations, for being of vigorous growth it requires much and also regular moisture, or the fruit falls off, which makes the roots always seek a low medium of soil, and hence become a series of *tap* roots. Now, where the soil is suitable, make a good bed of broken bricks, or stones, three feet thick, and covered with one foot of soil, before the root of the tree is placed on it—spread out the roots within six inches of the surface of the ground and then cover in; then mulch, and cover that with a layer of soil—fix one or more stout stakes by the trunk of the tree and fasten, but it will soon hold itself. Always take up pear trees with as much root as possible and trim the extremities of the fibers with a sharp knife. When a large tree does not indicate fruitfulness or has never borne fruit—some drive a very large nail into the trunk about its centre, and another nail in the transverse direction, with perfect success. The formation of fruit spurs indicates weakness in the tree and is caused by arresting the circulation of the sap—thus bending down the branches causes the *growing buds* to become *blossom buds.* A growing bud is longer and flatter than a blossom bud. I applied this process last week to a beautiful twelve year old golden pippin apple tree, which had never showed a blossom or blossom bud. Heading down causes laterals to spring forth, and then there is no end to pruning.

Pear trees should have the shoots of all kinds, not required for next year's bearing, clean cut away, for the excess of shoots which they produce in profusion, if all retained, even in a shortened state, will surely injure the tree for producing fruitful buds. To keep a tree in heart and fresh,—bore an auger hole about one foot from the ground and half way through—fill the hole with sulphur and cream of tartar, and plug it up—then whitewash as usual.—*Boston Cultivator.*

An Extensive Farmer.—John A. Sutter, of New Helvetia, California, advertises for two threshing machines for wheat, of a size and sufficient power for a crop of *forty thousand bushels!* He is one of the largest farmers in the world, and supplies the Russian traders with grain and provisions.

For the Farmers' Cabinet.

The Sailor—or the Value of a Potatoe.

In the Farmers' Cabinet for last month, is re-printed an article by the late S. G. Perkins, of Boston, on the merits of the different varieties of pears; and in illustration of the diversities of tastes in relation to fruits, an anecdote is related of a sailor, who, just from a voyage, had chosen from a rich variety of fruits in Boston market, a green cucumber, and while greedily eating it, bitter end first, said to one of the amused spectators, "If you will believe me, sir, it is the first I have tasted this year." Now, Jack thought, by this remark, he fully explained to the bystanders the ground of the singularity he knew he was exhibiting to the "landsmen;" and so he did, for those about him were somewhat familiar with the habits of the sailor and his wants. But the editor of the Cabinet has a note upon this anecdote, which shows conclusively, I think, that he is *not* familiar with them; and I feel quite sure, if at all successful in my attempt to explain the matter, I shall receive his thanks. "We should rather incline to call this an instance of the sailor's coarse *appetite*, than his taste." This is the beginning of the note, what follows being a just criticism on the misapplication of the word taste, and not explanatory of the part quoted.

To the words "*coarse appetite*," I object, as implying moral degradation, or, vulgar caprice; whereas, Jack was in no degree accountable for his peculiarity; for his taste was depraved or diseased by circumstances, over which he had no control; or, rather, his blood was vitiated, his body predisposed to disease by a long voyage; and the peculiar appetite, like the instincts of the lower animals, was the pointing of unerring Wisdom to the best attainable remedy; and I am sure the editor of the Cabinet would not call anything proceeding from this source, "common or unclean."

It is difficult for him who has all his life breathed an atmosphere teeming with the emanations of the fresh earth, and who has known no want of its recent products upon his table, to conceive the feelings, the longings of him, who for six successive months has not been gladdened by the sight of land; the salt air, the salt spray, "salt junk," and worm-eaten bread, with water that has long ceased to be pure, his sole companions and support.

I believe the whaling fleet from the United States alone, employs about 10000 men; many of them are gone from home four years, touching at ports every four to six months, for such fresh water and vegetables as the port may furnish; but as the "fishing grounds"* are almost wholly intertropical, such vegetables as they obtain keep but a short time; hence the condition of the men on these long voyages, is often such as I have represented; only sometimes they are on a short allowance of this hard fare. No long time elapses under these circumstances, before nature begins to succumb; scorbutic symptoms arise; languor, debility, bleeding at the mouth, and dropsical effusions occur; and when the deprivation is greatly protracted, it is not unusual to find a considerable part of the crew off duty from this cause. The sailor who prides himself upon his alacrity in the performance of his rugged offices, alow and aloft, by day and by night, in fair weather and foul, looses his strength and his ambition; he has no pain, but his feet swell, his appetite for such as the ship affords, fails, and he moves languidly about; a few more weeks or days, and a watery blood flows from his mouth, his breathing is laboured; effusion of water is taking place in the chest; he can no longer go aloft, and soon he goes below, never to re-appear on deck, unless timely relief comes to his aid. All these symptoms are unattended with pain; but they are preceded and accompanied throughout, with the intensest longing for *fresh vegetables;* and these,—with an exception or two not here worth naming,—are his only remedy; with them he lives, without them he dies. The pointings of nature, in this case, are both curious and instructive; the lemon, the melon, and all *fresh* fruits, are acceptable and useful; but the most urgent call is for the cruder vegetables, as the potatoe, the cabbage, &c., and this in their crudest state, uncooked—raw! Yes, the Irish potatoe, raw!! Every sailor who has been so placed, and every physician who has been much conversant with their diseases, knows that these are the very remedies, and this the very mode of administering them, that most speedily and most surely restores the prostrated man to health.

Now, a ship with one-fourth of her crew below, and few of the remainder quite well, "puts away" for the land; but she is six weeks, good sailing, from the nearest port, and some of her sick must be buried in the ocean without more timely relief. How anxiously does every eye watch for a passing ship—no common occurrence in the mid-Pacific—with a hope that she may be late from some haven, and yet have a few fresh vegetables. The ship is hailed, and—what is more precious than silver or gold—a few *potatoes* are obtained—the captain is the

* Alias, fathomless Oceans.

almoner; and he who has seen, in the "far West," a herd besiege the kit of salt, can conceive of the scene on board this lucky ship. "Eighteen on deck, and six below, all told; one a piece, boys, for the well; and two each, for the sick, daily." "All right, sir." Quickly the day's allowance is served, and closely does the hard hand grasp the prize; but we will go below—well does he know—that sailor in his narrow "bunk," with the broad bust, well bronzed in the sun, powerless, but not emaciated—well does he know the value of the gift, and he is content to use it frugally—if too exhausted to gnaw the sweet morsel, a shipmate scrapes a little with his knife and places it upon his tongue; if we may believe the oft-repeated declaration, no fruit, however luscious, no viand, however savory, could be half so palatable. As slowly he is served with one morsel after another—without drink, without condiment,—he seems to breathe more freely; and childish as himself thinks it, his emotions cannot be restrained; they are tears of joy and gratitude; a gratitude not confined to the hand that feeds him, nor yet, to the noble captain of the passing ship, who, from his nearly exhausted store, has bestowed the half upon them whose need was greater than his; but rough as is his exterior, the heartfelt offering ascends to the bountiful Giver.

Ask this man why he did not cook his potatoe, as other folks do, and as he himself ordinarily does? he will give a smile of pity for the ignorance that could prompt such a question, and reply, that it would be rendered insipid, lifeless, spoiled; and he is doubtless right; he has obeyed the instinct within him, and the effect, if it were not so common, would be truly marvellous; he has eaten a few crude bulbs, fresh from the earth, and is made whole.

Thus a single bushel of sound potatoes, yes, often a less quantity, has rescued a ship's crew of twenty-five to thirty men, from the most imminent peril. How wonderful is that Providence that changes our very tastes, our appetites; rendering that delicious to us, which is ordinarily unpalatable or disgusting, and thus guiding, equally the simple and the wise, to the use of the means our infirmities require.

The sailor is my friend, and I would not see him wronged; yet it must be confessed his tastes are not always thus pure—he will cheerfully give his silver dollar for a single Irish potatoe in time of need; and with equal alacrity, the same sum for a twist of "Negro-head:" not unfrequently, also, when on shore, he is induced by the tempter to bestow his money for gratifications less innocent—still, he is a man of noble impulses, more sinned against than sinning; and could we realize his peculiar privations and perils, I am sure *one* good effect would be, to kindle our dormant sympathies in his behalf; and *another*, to inspire us with a more lively sense of gratitude for the unceasing bounty that crowns our board.

INDEX.

In justice to himself as well as to the editor of the Horticulturist, the editor of the Cabinet may remark, that the note referred to by Index, was not his, but was copied from the Horticulturist, with the matter in the text. Index has certainly made a very pleasant as well as instructive article of his criticism. We heartily wish, that for the reputation of our paper and the benefit of our readers, his visits were not so "few and far between."—ED.

EXTRAORDINARY CURE OF A PUERPERAL FEVER IN A COW.—The following case may prove interesting to our agricultural readers at this season: "On the 1st of March one of my cows calved, and appeared afterwards to be quite well. On the following morning, to my surprise, she was down and unable to rise, with loss of appetite, and quite unconscious of everything; ears and muzzle quite cold, her head turned back to her side, and to every appearance a speedy death was inevitable. I sent for C. S. Green, veterinary surgeon at Pershore, who, on his arrival, pronounced it a hopeless case, but wished to try the effects of a compound of ether, with cathartics, which I agreed to, and by the repeated administering of those medicines, in thirty-six hours after its being first administered she got up and began feeding. On the eighth day she was pronounced to be quite well. Having lost a case four years ago by the same disease, which was medically treated, and from knowing it to be a very fatal disease, in future I shall be enabled to have recourse to a preventive."

WILLIAM DOUGHTY,
Kinnersley, near Severn, Stoke.

DRAINING.—H. Colman, speaking of the evils of *stagnant* water in the soil beneath the surface, says: "plants produced on a very wet soil, are unpalatable, innutritious, and insubstantial. Animals fed upon them always lose condition, and the manure of animals so fed is almost worthless. I saw this strikingly illustrated in the magnificent park of the Duke of Bedford, at Woburn Abby. Here there were many spots where the grass was luxuriant and abundant, on account of their excessive dampness, and which were entirely neglected both by the sheep and the deer; but wherever these places, once wet, had been thoroughly drained, they became the favourite resorts of these animals, and were fed as closely as possible."

Hymn of the City.

BY WILLIAM C. BRYANT.

Not in the solitude
Alone may man commune with heaven, or see
Only in savage wood
And sunny vale the present Deity;
Or only hear his voice
Where the winds whisper and the waves rejoice.

Even here do I behold
The steps, Almighty!—here, amidst the crowd
Through the great city rolled,
With everlasting murmur deep and loud—
Choking the ways that wind
'Mongst the proud piles, the work of human kind.

Thy golden sunshine comes
From the round heaven, and on their dwellings lies,
And lights their inner homes—
For them thou fillest with air the unbounded skies
And givest them the stores
Of ocean, and the harvest of its shores.

Thy Spirit is around,
Quickening the restless mass that sweeps along;
And this eternal sound—
Voices and footfalls of the numberless throng—
Like the resounding sea,
Or like the rainy tempests, speaks of thee.

And when the hours of rest
Come, like a calm, upon the mid sea brine,
Hushing its billowy breast—
The quiet of the moment, too, is thine;
It breathes of Him who keeps
The vast and helpless city while it sleeps.

Report of the Committee of Arrangement of the Philadelphia Society for Promoting Agriculture.

The committee of arrangement appointed to prepare for and attend the annual exhibition of this Society, submit the following Report:

The exhibition was held at the Lamb Tavern on the Lancaster turnpike, one mile from the Schuylkill permanent bridge, on the 14th and 15th of October.

The committee had previously made an agreement with Mr. Gheen, the proprietor of the premises, to have the ground—about two acres—enclosed with a substantial board fence of nine feet in height. As the Society for several years back had expended large sums in payment of premiums and other matters connected with agricultural improvements—and the committee being anxious to extend its sphere of usefulness, resolved to adopt the plan, so successfully adopted in some of the neighbouring States on the like occasions, that of charging a small sum for the admission of visitors, not exempting their own members. The result proved to be quite satisfactory—but little objection was made to the payment of the small amount demanded, by any, whilst nearly all of the large concourse of persons who visited the ground, were gratified by giving their aid in that way to the cause of agriculture.

In place of stalls for cattle, strong posts were placed in the ground at the distance of eight feet from each other, along three sides of the lot, to which a wide board was nailed, leaving an avenue of ten feet in width between the range of posts and the outside fence, forming a secure and pleasant promenade for visitors, and affording a fine view of the animals exhibited.

On the west side numerous pens were erected for sheep and swine; a shed for the protection of the agricultural products, places for the exhibition of poultry, &c. The gate by which visitors entered the show ground was about midway on the west side, on the left of which was erected a temporary building for the accommodation of the committee of arrangement and the officers of the Society.

The implements of husbandry were placed on an elevated part of the lot a little north of the centre, leaving a convenient portion of the ground for the exhibition of horses.

The gateway for the admission of the various animals and implements, &c., was on the north, bordering the turnpike leading to the wire bridge.

Before nine o'clock, A. M., the committee were busily engaged on the ground, directing the movements of the animals and assigning places for each, and arranging the implements and produce; whilst cards were being furnished by the Secretary with the names and description of the animals and implements, which were properly affixed to each. By eleven o'clock all was completed, and the judges appointed to examine the various animals and articles headed by their chairman, commenced the performance of their duties.

By twelve o'clock the horses were to be seen in motion on that part of the ground assigned to them, attracting the attention of a large number of persons; they numbered about twenty in all of the different breeds of that noble animal. The thorough bred horse and roadster, the sturdy and active Canadian, and the Norman horse were most conspicuous.

The show of cattle was good, consisting of near one hundred head. The stately and high bred Durham, the beautiful Devon, and their crosses attracted great attention. Also

the Alderney, Scotch and Kerry cows, many of each showing great milking properties, and affording the strongest evidence of their superiority over the unimproved stock of the country.

Several pairs of fine working oxen were exhibited, bred in the States of New York and Connecticut; they were well trained, and their performances were highly satisfactory. The Devons attracted great admiration, being nearly of the same size, form and colour.

The show of sheep consisted of the Leicester, Cotswold, and Southdown, and their grades; their appearance exemplified the most convincing proof of their superiority over the common breeds, for both plenty of wool and fine mutton.

The swine were principally of the Chester county breed, large and well formed, and having the appearance of easy keepers. Some good grade Berkshires were also there.

There was a handsome display of the different breeds of domestic fowls, such as Jersey Blues, Malay, and other large breeds from India, with the beautiful Poland and Mufflers.

The display of agricultural products, both in quantity and quality, far surpassed any thing of the kind ever seen at any former exhibition of the Society, the specimens both of grain and roots, were large and beautiful —the latter will be found to be highly valuable food for cows and sheep during the winter season. The implements of agriculture were numerous and of excellent construction; wheat fans, straw and stalk cutters, corn shellers, drill machines, corn planters, &c., were all calculated to facilitate the operations of the cultivator of the soil and to lessen his labour.

The character of the Philadelphia butter was well sustained by the specimens presented for examination, they were of superior quality.

The trial of ploughs and ploughmen came off on the second day of the meeting. A suitable piece of ground having been obtained near by, the portions laid off for each one contained about the one-eighth of an acre. After the distribution of lots the order was given to commence the trial,—all went on steadily, without difficulty or confusion. The work was completed in about half an hour, and in a manner highly creditable to all engaged. The ploughs were generally of the most approved patterns, and the skill of the ploughmen elicited the admiration of the numerous spectators assembled to witness the most interesting portion of the exhibition.

Before two o'clock the committees had prepared their reports and placed them in the hands of the President, A. S. Roberts, who addressed a few remarks by way of encouragement, to farmers to persevere in so meritorious a cause; the reports were read by him in the presence of several hundred persons, announcing to the successful competitors the premiums assigned to them—a copy of which is appended.

Perhaps on no former occasion has the award of the different committees been received with greater satisfaction; the unsuccessful candidates evincing the best and most liberal temper, and a determination to make another trial at the next annual meeting.

The premiums offered by the Society on this occasion, amounted to more than six hundred dollars.

At three o'clock the members of the Society present, with the judges and a few invited guests, amongst which were some of the distinguished gentlemen of the editorial corps of the city and county, sat down to a most excellent dinner provided for the occasion, by Mr. John Gheen, of the Lamb Tavern. After the removal of the cloth, addresses were delivered by the President, Mr. Roberts, M. M'Michael, Esq., Professor Robert Hare, and others, all of which were listened to with the greatest attention, and elicited the hearty applause of all present.

Among the large number of persons in attendance at the exhibition, were many distinguished farmers from our own and the neighbouring States. Old Virginia was also represented by that ardent and honoured friend of agriculture, General W. H. Richardson, who expressed his high approbation of the articles and animals exhibited.

The whole affair passed off in a manner highly creditable to the Society, affording the greatest encouragement to persevere in a cause in the success of which the comforts and happiness of the human family are chiefly dependent.

In conclusion, it is to be hoped that the day is not distant when every farmer will be convinced that he would be benefitted by becoming a member of an Agricultural Society, and a subscriber to an agricultural paper.

ROBERT T. POTTS,
ISAAC W. ROBERTS,
A. L. ELWYN,
GEORGE BLIGHT,
AARON CLEMENT,
DAVID LANDRETH,
DAVID GEORGE,
DENNIS KELLY,
MANUEL EYRE,
A. S. ROBERTS,
Committee of Arrangement.

Philadelphia, Nov. 3, 1847.

The Agricultural Fair and Cattle Show.

Yesterday, October 15th, in pursuance of notice given, the annual exhibition of the Philadelphia Society for promoting Agriculture again met at the Lamb Tavern, on the Lancaster Turnpike. The attendance of farmers, agriculturists, and others who take a deep interest in all that concerns agriculture, farming, the feed of cattle, &c., was large, though not so great as last year. The horses were excellent, of the best breeds, and commanded general admiration. Mr. R. J. Potts, of Montgomery county, exhibited some splendid specimens of oxen, as did also Mr. Blight, of Philadelphia county. There were several fine specimens of swine of various breeds exhibited, all of which were spoken of in terms of exultation on account of their great weight, singularity of appearance and cleanliness. Mr. B. Hickman, of Chester county, Mr. James Ezray, of Blockley Township, Mr. H. J. Helmbold, of the Pennsylvania Hospital for the Insane, Chester county, and Mr. Robert Green, Chester county, had some admirable specimens of various herds on exhibition.

Sheep.—There were several capital specimens of various breeds of this animal shown; amongst the rest the following: Southdown, Bakewell, and mixed blood. Of those who contributed their stock may be mentioned, Mr. John Johnson, of Montgomery; Mr. John F. Thurlon, Mr. D. Robinson, Mr. John Worth, Mr. Aaron Clement, and Mr. Isaac Newton. There were some splendid specimens of the Durham, Devonshire, and Alderney bulls and cows, and also of the American breed of the same cattle.

With regard to agricultural implements, we may mention that the assortment was tolerably large; Mr. D. O. Prouty, of this city, alone deposited about forty specimens of implements, as fanning mills, a corn sheller, hand corn mills, seed planters, threshing machines, ploughs, &c. Mr. E. Chandler, of Market street, also exhibited a recently patented machine for grinding corn. There was a great variety of spades, shovels, hoes, forks, &c.

A variety of vegetables and grains were also exhibited—cabbages of enormous size—mammoth beets, and huge turnips. There were some rare specimens of Indian corn and sweet potatoes—being the finest and the largest we had ever seen. Those who contributed these articles were Mr. Isaac Newton, Delaware county; Mr. George Blight, of Philadelphia county; Mr. R. G. Potts, of Montgomery county; and Mr. J. J. Taylor. Some fowls of very rare and beautiful breeds—the Muffler and Marraboo, were also exhibited, which drew forth marks of admiration.

About ten o'clock in the morning, the various competitors for the premiums offered by the Society, to those farmers who should exhibit the most skill and excellence in ploughing, came off in a field, the property of John Hare Powell, Esq., at a short distance from the Lamb Tavern. Eleven persons, ploughmen, tried their skill by ploughing each a quarter of an acre of ground, either with two horses, or two or four oxen, attached to ploughs of various constructions. Great ability and rapidity were generally exhibited, and much praise was given to those who had most distinguished themselves. Besides the judges in attendance, there was also several hundreds of agriculturists, farmers, scientific characters and others, as well from the country as from the city and county of Philadelphia.

At two o'clock, the judges and the committee on premiums met, and announced to the people assembled within the enclosure, where the fair was held, the premiums which they had come to the determination to award. Owing to a want of space in our paper of this day, we are compelled to defer the publication of them until Monday next. At three o'clock, the gentlemen comprising the committee, together with the judges, and a large number of other gentlemen, sat down to an excellent dinner provided by the landlord of the Lamb Tavern; and before the dusk of the evening they separated, after having passed a few agreeable and instructive hours together.—*Pa. Inquirer.*

Premiums.

Horses.—The committee on horses respectfully offer their report:

For the best thorough bred stud horse, they assign the first premium to John Sharpless, for his horse Valentine, $10.

Second premium to Austin Mellor, for his bay horse, Colman's Tour.

FOR THE FIELD AND ROAD.

The first premium they assign to Evan Lewis, for his iron grey, Jackson, jr., $8.

Second premium to Elisha and George Worrall, for their grey stud horse, Fagdown, Colman's Tour.

For the best thorough bred brood mare, they assign to W. W. Barbour, for his bay mare, Kitty Stanley, $8.

For the best mare, adapted to field and road, they assign the second premium of Colman's Tour, to Samuel S. Richie, for his bay mare, Jenny Blackburne.

For the best horse colt between two and four, they assign the first premium to Morris

Penrose, for his bay stallion, Sir Harry, $6.

Second premium to W. Blackburn, for his brown colt, Dread, Colman's Tour.

For the best filly or mare colt, between two and four, they assign the first premium to W. W. Barbour, for his bay filly, Modesty, $4.

Second premium to Clinton Smedley, for his grey filly, Fagdown, $1.

For the best filly or mare colt, between one and two, they assign the first premium to W. Blackburn, for his dark bay filly, Speedwell, $3.

A. L. Elwyn,
James Torbert,
Joseph C. French,
Jacob Peters.

The horses for the field and road were this year more than usually good, indicating judicious and careful breeding. The committee deems it due to those gentlemen who exhibited the horses of this class, to state that in their opinion all are deserving of public patronage. The duty devolved on them of making a selection, and where the merits of the several animals were so nearly equal, this required a very cautious exercise of judgment. They include in these remarks the two horses Trafalgar and Black Prince, that from coming to the ground too late, were, by the regulations of the Society, excluded from competing for the premiums, as well as Mr. Eyre's fine thorough bred stallion, Mingo Junior, who was also ineligible, from having already taken the first premium at a former exhibition of the Society.

October 14th, 1847.

Cattle over two years old.—The committee appointed as judges of neat cattle over two years old, after having examined the different animals submitted to their view, award premiums as follows, viz:

For the best Durham bull over three years old, to Dennis Kelley, for Valentine, $10.

For the next best to Isaac W. Roberts, for Sir Robert, Colman's Tour.

For the best Durham bull, between two and three years old, to John Jackson, for Sugnan, $8.

For the next best, to John R. Suplee, for Tom Thumb, Colman's Tour.

For the best bull of Devon blood, to Judge Longstreth, for Doctor, $8.

For the next best to Manuel Eyre, for Melbourne, Colman's Tour.

Ayrshire bulls, none offered.

For the best Alderney bull, to Benjamin R. Suplee, for Jerry, $8.

For the best Durham cow over four years old, to John H. Andrews, for Pocahontas, $8.

For the next best, to J. W. Roberts, for Flora, Colman's Tour.

For the best Durham cow, between two and four years old, to J. T. Huddleson, for Fanny Grey, $8.

For the next best, to Samuel Cooper, for Lady Jane, Colman's Tour.

For the best Durham heifer between two and three years old, to John Jackson, for Victoria, $6.

For the next best, to Samuel Oven, for Jess, Colman's Tour.

For the best heifer of mixed breed, between two and three years old, to John H. Andrews, for Betsy, $4.

For the next best, to Dennis Kelley, for Lady Montgomery, Washington's Letters.

For the best cow of Devon blood, to W. W. Roberts, for Lady Jane, $6.

For the next best, to Manuel Eyre, for Dewdrop, Washington's Letters.

For the best Alderney cow, to John R. Suplee, for Jenny, $6.

For the best cow of mixed blood, to Henry J. Helmbold, for Beauty, $4.

For the next best, to Owen McCue, for Jenny, Washington's Letters.

For the best cow of native breed, to Josiah Barnett, for Nell, $4.

For the next best, to Samuel Cooper, for Sally, Washington's Letters.

For the best yoke of working oxen, reference being had to their performance, to Mr. G. Blight, $10.

For the second best do., to J. W. Roberts, $6.

For the third best do., to R. T. Potts, Colman's Tour.

For the best fat steer, to David S. Bunting, $6.

The committee noticed a beautiful Scotch Mountain cow, exhibited by Mr. Samuel Rogers, of Blockley, and also one by Joseph Kirkner, both pretty animals, displaying good milking properties. A Kerry cow was shown by Mr. J. S. Huber, showing prime points and good properties. Mr. H. also had several other good animals on the ground.

Many other fine cattle were exhibited that were worthy of premiums, and the committee regret that they had not more to bestow. Many of the spirited farmers of the adjoining counties of Delaware, Chester, and Montgomery, have displayed a most praiseworthy evidence of their determination to continue the improvement of their stock.

Thomas S. Woodward, *Chairman*,
Benj. Serrill,
John Hibberd,
David George.

Cattle under two years old.—We the undersigned, a committee of the Philadelphia Society for promoting Agriculture on neat cattle under two years old, report as follows, viz:

For the best Devon bull, between one and two years old, to Joseph Kirkner, for Judge, $4.

For the best Durham bull calf, under one year old, to John H. Andrews, for Montezuma, $2.

For the next best to the Pennsylvania Hospital, for bull Sultan, $1.

For the best Alderney bull calf, under one year old, to John R. Suplee, for Oregon, $2.

For the best bull of mixed blood, under one year old, to Francis Collins, for his bull Jim, $2.

For the next best to Isaac Newton, for his bull Rodney, $1.

Heifers.—For the best Durham heifer between one and two years old, to A. C. Roberts, for Rowena, $6.

For the next best, to John H. Andrews, for Beauty, Washington's Letters.

For the best Devon heifer, between one and two years old, to Morris Longstreth, for Fox, $4.

For next best, to Morris Longstreth, for Lilly, $2.

For the best Alderney heifer, between one and two years old, to John R. Suplee, for Silly, $4.

For the best heifer of native breed, between one and two years old, to Mrs. Frances Hennis, $4.

For the best Durham heifer calf, under one year old, to Isaac W. Roberts, for Vermillion, $2.

For the best Alderney heifer calf, under one year old, to John R. Suplee, for Daffy, $2.

For the best heifer of mixed breed, between one and two years old, to Wm. Webster, for Cherry, $4.

For the second best to Wm. Webster, for Becky, $2.

For the best heifer calf of mixed blood, under one year old, to H. J. Helmbold, for Almira, $2.

Isaac W. Roberts exhibited a fine young steer, Rough and Ready, for which the company awarded a complimentary premium of $2.

All of which is respectfully submitted.

Joseph Crawford,
John M. George,
William Johnson,
John Johnson,
Samuel Cooper.

Sheep.—The committee on sheep report that they award to Aaron Clement for the best Bakewell buck, $4.

For the next best, to Aaron Clement, $2.

For the best Southdown buck, to Aaron Clement, $4.

For the next best do. do. $2.

For the best Cotswold buck over one year, to Aaron Clement, $4.

For the best Southdown buck to Aaron Clement, $4.

For the next best, to Aaron Clement, $2.

For the best Bakewell ewes, to John Johnson, $4.

For the best Southdown ewes, to Aaron Clement, $4.

For the next best, to John Thurlow, $2.

For the best ewe lambs, to D. Robinson, $2.

For the next best do. do. $2.

For the best four ewes of mixed breed, to D. Robinson, $2.

David Lardner, *Chairman*,
David Whitall,
Benedict Gheen,
Enos Gheen.

A superior lot of mixed blood sheep were brought to the ground last evening, by Mr. John Bradley, of Chester county. They reflect great credit on the enterprising breeder. The committee regret that they arrived too late for examination.

Hogs.—The committee on swine beg leave to report that they have examined the different pens, and award—

For the best boar, to James Esray, $4.

For the next best do., to H. J. Helmbold, $3.

For the best boar over six months and under one year, to James Esray, $4.

For the best sow, to Pennsylvania Hospital, $4.

For the next do., to Manuel Eyre, $2.

For the best boar pig, between two and six months old, Chester county breed, to James Esray, $3.

For the next best Chester county, H. J. Helmbold, $2.

For the best sow pig, between two and six months old, to James Esray, $3.

For the next do., James Esray, $2.

For the best five pigs under two months, to Richard Cartwright, $4.

For the next best, to Robert Green, $2.

For the best sow pigs, between two and six months old, of Chester county breed, to Benjamin Hickman, $3.

For the next best, to Benjamin Hickman, $2.

For the best boar pig, between two and six months old, to Benjamin Hickman, $3.

For the next do., Benjamin Hickman, $2.

The committee were much gratified with the fine display of pigs, &c., &c.

JOHN LARDNER,
DAVID WHITALL,
BENEDICT GHEEN,
ENOS GHEEN.

The committee on butter and poultry, beg leave respectfully to report—that they award

For the best pair of Jersey Blue fowls, to Aaron Clement, $2.

Also to Aaron Clement for second best do., $1.

For the best pair of other improved breeds, Poland fowls, to William Leonard, $2.

For the second best improved breed, to M. Crouse, $1.

For the best pair of capons five months old, to Anthony Newbold, $2.

For the best pair of ducks to —— Cartwright, $2.

For the next best to —— Cartwright, $1.

For the best pair of geese, to Manuel Eyre, $2.

To Anthony Newbold, a special premium for his Chinese (Thangber) and Marrabar fowls, $2.

M. Crouse, a special premium for his Malay Cock, $1.

The committee report that they were highly pleased with the general display of fowls. William Leonard deserves great credit for the attention he has given to the improvement of the Poland fowls; also, much praise is due to Michael Crouse for his white and black Poland chickens. The Jersey Blues exhibited, were very superior.

To John Thomas they award the first premium of a silver butter knife, $5.

For the next best, to —— Tothweight, Colman's Tour.

GEORGE WRIGHT,
JAMES MCPHERSON,
HOMER EACHUS.

The committee on implements and produce, report—that the objects brought together have been unusually numerous, and worthy of attention. The most extensive and best display of implements made by one person, was that of D. O. Prouty, to whom they award the first premium of $10; and the next best that of E. Chandler, the second premium, Colman's Tour.

The Wheat Fan made and exhibited by Edwin Chandler, of Philadelphia, besides preparing the grain for market, has an arrangement by which the seed of Timothy is deposited so as to be obtained separately. The committee award for this the first premium for Wheat Fans, $4.

For the next best Fan, which also separates the Timothy, they award the second premium to J. Bamborough's Fan, Lancaster, Pa., $2.

For the best Corn Sheller they award the first premium of $4 to D. O. Prouty, for his improved large double Corn Sheller, for shelling and screening corn, and separating it from the cobs, adapted to hand or horse power.

For the next best to E. Chandler, for his double Corn Sheller, they award the second premium of $2.

For the best horse power Straw or Stalk Cutter, to Jesse Urmy, of Wilmington, Del., for his Corn-stalk Cutter and Grinder, $6.

For the best Straw or Hay Cutter, they award the second premium of $4 to J. G. Talbot, for Richardson's patent.

For the next best Straw or Hay Cutter, they award the second premium of $2 to D. O. Prouty, for Hovey's patent.

For the best Drill Machine, they award the first premium of $2 to Pierson's Grain Drill.

For the second best to Smith's Grain Drill, $2.

For many machines and implements of great value no premiums have been offered by the Society. Among those which particularly attracted the attention and admiration of the committee, may be named, the Grain Thresher and horse power exhibited by Wheeler, Meleg & Co., of Norristown, Pa., together with the Cutter adapted to the horse power, for which the committee award an honorary premium of $4.

The committee would also deem worthy of special notice the Double Geared Self-Adjusting Chain Horse Power, of Jesse Urmy, of Wilmington, Del., together with his Stalk Cutter, and Corn-cob Crusher and Grinder.

R. T. Potts exhibited a drill for planting corn, made by E. J. Dickey, of Hopewell, Chester county, Pa., which had proved itself very efficient in putting in the crop of the present season. For this Corn Drill the committee award an honorary premium of $2.

To D. O. Prouty, for his Churn, the committee award an honorary premium of $2.

To Jacob Rogers, Jr., a premium of $2 for Birdsell's Double Pointed and Self-Sharpening Cultivator.

The committee also noticed an alleged improvement in the Water Ram made by N. and G. M. Kohl, of Willow Grove, Pa.,—said to consist in the substitution of brass inner valves.

For the Wheat Fan of Armstrong & Montgomery, they award an honorary premium of $2.

The Wheat Drill exhibited by Mr. M. Eyre is worthy of notice, for its economy and alleged good performance.

Also the Cradle Corn Cutter, exhibited by the same gentleman.

Produce.—For the greatest variety and best display generally, the committee award the first premium to George Blight, $8.

For the next best to Samuel Cooper, of Penn Township, Colman's Tour.

For the best sample of red wheat, the first premium is awarded to C. S. Stockton; for the next best to George Blight, $1.

For the best white wheat they award the first premium to Robert T. Potts, $3, and for the next best to the Pennsylvania Hospital, $1.

For the best sample bushel of rye, they award the first premium to Isaac W. Roberts, $2; for the next best to George Blight, $1.

For the best sample bushel of flint corn, they award the first premium to Samuel Cooper, of Penn Township, $2; for the next best to S. S. Richie, $1.

For the best Gourd Seed corn, they award the first premium to Edward Rogers, $2; for the next best to Charles Waters, $1.

For the best mixed corn, they award the first premium to Enos Green, of Brandywine, Chester county, Pa., $2; for the next best to Isaac Newton, $1.

For the best sample bushel of potatoes, they award the first premium to Samuel Cooper's College potatoes, $2; for the next best to Mrs. F. Hennis, $1.

For an uncommonly fine variety of white corn, the committee award an honorary premium of $1 to Wm. Potts, of Montgomery county.

For beautiful bouquets presented to the Society by Robert Henry, gardener of G. Blight, the committee award an honorary premium of $2.

The committee would notice, as particularly worthy of admiration, W. D. Rapp's white Mediterranean wheat, the fine vegetables from the farm of R. T. Potts, and the Pennsylvania Hospital; the Isabella and Powell grapes of A. S. Roberts, a fine display of mangel wurtzel and ruta bagas by Isaac Newton; the Mammoth and Cheese pumpkins, Valparaiso squashes, ruta bagas and carrots, from the farm of Samuel Williams; the Norfolk white turnips and ruta bagas of Wm. Webster, and the carrots and ruta bagas of S. S. Richie.

All of which is respectfully submitted.

G. Emerson, *Chairman*,
Samuel Williams,
Jesse George,
Robert Hare,
Daniel Dager,
Anthony Newbold.

Lamb Tavern, Oct. 15th, 1847.

The committee on ploughs and ploughing were highly gratified with the superior manner in which all the ploughing was done; it being very difficult, where all was so good, to decide which was in reality the best, and wished it were in its power to give each man a premium. We however award the first premium for the best plough to Prouty's No. 3½, $10; second best, Colman's Tour, to Buckman's No. 8; first premium for the best ploughman, $5, to John Hall; second best, Colman's Tour, to Joseph Rhoads.

We also award a complimentary premium of $3 to Robert T. Potts, for his superior working oxen—performing the work in the best manner, without an extra driver.

Samuel S. Richie,
Isaac Newton,
John Sharpless,
John P. Hunter,
Chalkley Harvey.

Economy.

A thorough-going, hardworking man and his wife, who pulled together, had, by dint of labour and good management, laid by a sum of money, with which he stocked a farm, although scantily, it must be confessed. He worked two horses, and his wife milked four cows; and the business worked finely the first year: but then one of his horses died, and the other fell lame; and to prove the truth of the old saying, "misfortunes never come single handed," all his cows died by the distemper, then raging in the country. This also was the year, when the fly literally destroyed his wheat, and the drought the potatoe crop; so there was an end of all his hopes, and with them, the power for future exertion! In his distress he went to an old friend of his father, who lived in the city, and told him his tale. His friend desired him to call next day, and he would, in the mean time, see if anything could be done. On meeting him next morning, his friend said, "I know your honesty and industry, and you must not give up. I will lend you what money you may want, until you can repay me; go ahead. The

only condition I shall exact of you is this—that neither you nor your wife spend one shilling, before taking it in your hand and asking yourselves, "can we possibly do without spending this?" and to your honesty I leave the result.

The man consented, and purchased three horses and six cows, and a fine large lot of town dung, as indispensables, with some improved tools, for he knew the value of them. But when his jacket, for the third time, was gone at the elbows, and his trousers at the knees and behind, and his wife thought she could no longer possibly mend them, they conscientiously resorted to the ordeal of the trial by the shilling, and ordered, that a piece of bed ticking, which his wife had by her, would suit both purposes; while the shirt, patched in the body so as almost to resemble Joseph's coat, would be quite as well without sleeves this hot weather, and shoes are useless when the weather is fine. His wife's gowns had become much straightened, by cutting up one to mend another; for, by the ordeal of the shilling, it was found possible to do without spending it in repairing pieces. In the mean time, everything flourished out of doors. The increased strength of teams and dairy, the improved tools, and purchased manures, had increased their means threefold; and to lay by a dollar, was far more pleasant than to spend it—a fine maxim that.

Suffice to say, in far less time than his friend expected, he called on him, in his patched clothes, to repay the borrowed money; and to the question, how had he been enabled so soon to do it? he replied, "by adding to my resources out of doors, and by the rule of the shilling; but only see what a figure I am!" adding, "to you I am indebted for a secret which will enable me to buy a farm instead of renting one." After this, we would advise young farmers to "Borrow all you can, and lend it to the farm. Trust to it and the trial by the shilling, and by the Divine blessing you will become rich, and no mistake."—*Boston Cultivator.*

Curious Phenomenon.

Amid all the wonders which unfold themselves in the great temple of nature, there are some in its arcanum which we can but imperfectly comprehend or analyze. The ascension and circulation of sap, to perfect the growth and nutrition of plants, has employed some of the most able minds, without arriving at any satisfactory conclusions. I recollect, in the month of April, 1840, that a phenomenon occurred to me which attracted my attention. Being out one morning on a ramble in my favourite pursuits,* I discovered a specimen of a bird which I was desirous of obtaining perched upon the loftiest summit of a white birch tree, *Bétula populifòlia.* A discharge of the gun brought down the bird, and when stooping to pick up my game, I was much surprised at a continued shower of rain, in large drops, oozing from the bark of the branches of a large limb just above my head: this continuing unabated, I was forced to go from under the limb, to prevent my powder being wet when re-loading. As the leaves had not expanded, and the buds had just begun to germinate, I took particular pains to investigate the matter, as the sky was perfectly clear, and no more than ordinary dew on the grass. The location of the tree was near the base of a high hill, the ground very moist, and studded over with springs of water. The tree on examination proved to be of a healthy structure throughout, and no appearance of water dropping from the limbs of any other part of the tree except the branch alluded to; this, to all appearances, was sweating from every twig and ramification, from the junction of the limb with the main trunk to its termination. This continued for an hour, and I left. Returning that way late in the afternoon, the raining from the limb had but slightly diminished, presenting nearly the same appearance as when I left in the morning. By what law this singular ascension of the aqueous fluid could have taken place in a separate limb of the tree, I am not able to answer.—*Hovey's Magazine.*

Remarks on Pickling.—The season is approaching for preparing pickles and preserves for home consumption, and a friend at our elbow gives us a hint to caution our thrifty housewives to be careful in their selection of vessels to be used in this business, as common earthen or potter's ware is dangerous to health on account of its being glazed with lead, which all acids will corrode or dissolve—and by this means it becomes mixed with our aliment, the effect of which on the health of individuals cannot but be sensibly felt. Vessels made of glass or stone ware, are decidedly the best for pickles and preserves—and even wood may be used for pickles with good effect. Vessels of large size should not be used for these purposes—the smaller the better—for it should be opened and exposed to the air as seldom as possible.—*Boston Journal.*

* He is a distinguished ornithologist, and has furnished several hundred beautifully prepared specimens of birds from Florida to Maine, for the museum of the Natural History Society in Portland.—*H. A. S. D.*

Silas Wright's Address,

At the Exhibition of the New York State Agricultural Society, 9th mo. 16, 1847.

(CONCLUDED.)

Does any one believe, that for generations yet to come, the agricultural operations of the United States are to be circumscribed within narrower comparative limits than the present; or that the agricultural productions of the country are to bear a less ratio to our population and consumption than they now do? I cannot suppose that any citizen, who has given his attention to the considerations which have been suggested, finds himself able to adopt either of these opinions. On the contrary, I think a fair examination must satisfy every mind that our agricultural surplus, for an indefinite future period, must increase much more rapidly than our population and the demand for domestic consumption. This I believe would be true without the efforts of associations, such as this, to improve our agriculture. The condition of the country, and the inclination and preference of our population for agricultural pursuits, would render this result unavoidable; and if this be so, when the impetus given to agricultural production by the improvements of the day; the individual and associated efforts constantly making to push forward these improvements with an accelerated movement; the mass of educated mind turned to scientific researches in aid of agricultural labour; the dawning of a systematic and universal agricultural education; and the immense bodies of cheap, and fresh, and fertile lands, which invite the application of an improved agriculture, are added to the account, who can measure the extent or duration of our agricultural surplus, or doubt the soundness of the conclusion, that the export trade must exercise a great influence upon the market for the agricultural productions of the country for a long series of years to come?

Such is the conclusion to which my mind is forced, from an examination of this subject, in its domestic aspect simply; but there is another now presented of vast magnitude and engrossing interest, and demanding alike from the citizen and the statesman of this republic, the most careful consideration. All will at once understand me as referring to the changes and promises of change in the policy of the principal commercial nations of the world, touching their trade in the productions of agriculture. By a single step, which was nothing less than commercial revolution, Great Britain practically made the change as to her trade; and subsequent events have clothed with the appearance of almost superhuman sagacity, the wisdom which thus prepared that country to meet the visitation of famine, which has so soon followed, without the additional evil of trampling down the systems of law to minister to the all-controlling necessities of hunger. Changes similar in character, and measurably equal in extent, though in many cases temporary in duration, have been adopted by several other European governments, under circumstances which render it very doubtful how soon, if ever, a return will be made to the former policy of a close trade in the necessaries of human life.

New markets of vast extent and incalculable value, have thus been opened for our agricultural surplus, the durability and steadiness of which it is impossible yet to measure with certainty. It is in our power to say, however, that a great body of provocations to countervailing restrictive commercial regulations, is now removed, in some instances permanently, and in others temporarily in form; and it would seem to be the part of wisdom, for the agriculture of this country, by furnishing these markets to the extent of the demand, with the best articles, at the fairest prices, to show to those countries, and their respective governments, that reciprocal commercial regulations, if they offer no other and higher attractions, present to their people a safeguard against starvation.

Such is the connection, now, between our agriculture and the export trade and foreign market, and these relations are to be extended and strengthened, rather than circumscribed and weakened, by our agricultural advances. The consumption of the country is far short of its production, and cannot become equal to it within any calculable period. On the contrary, the excess of production is to increase with the increase of population and settlement, and the improvements in agriculture and agricultural education. These appear to me to be facts, arising from the condition of our country, and the tastes and inclinations of our people, fixed beyond the power of change, and to which theories and principles of political economy must be conformed, to be made practically applicable to us.

The American farmer, then, while carefully studying, as he should not fail to do, the necessities, the wants, and the tastes of all classes of consumers of his productions in his own country, must not limit his researches for a market within those narrow bounds. He must extend his observations along the avenues of commerce, as far as the commerce of his country extends, or

can be extended, and instruct himself as to the necessities, and wants and tastes of the consumers of agricultural productions in other countries. He must observe attentively the course of trade, and the causes calculated to exert a favourable or adverse influence upon it; watch closely the commercial policy of other countries, and guard vigilantly that of his own; accommodate his productions, as far as may be, to the probable demands upon the market, and understand how to prepare them for the particular market for which they are designed. Next to the production of the best article at the cheapest price, its presentation in the market in the best order and most inviting condition, is important to secure to the farmer a ready and remunerating market.

So long as our agricultural shall continue to be an exporting interest, these considerations, as second only to the science of production itself, will demand the careful attention and study of our farmers, and in any well digested system of agricultural education, its connection with manufactures and the mechanic arts, with commerce, with the commercial policy of our own and other countries, and with the domestic and foreign market, should hold a prominent place. A thorough and continued education in these collateral, but highly necessary branches of knowledge to the farmer, will prove extensively useful to the American citizen, beyond their application to the production and sale of the fruits of his labour. They will qualify him the more safely and intelligently to discharge the duties of a freeman; and if called by his fellow citizens to do so, the more beneficially to serve his state and country in legislative and other public trusts.

I hope I may offer another opinion in this connection, without giving offence, or trespassing upon the proprieties of the place and occasion. It is that this education in the just and true connection between the agricultural, the commercial, and the manufacturing interests of our country, equally and impartially disseminated among the classes of citizens attached to each of these great branches of labour, would effectually put an end to the jealousies too frequently excited; demonstrating to every mind, so educated, that, so far from either being in any degree the natural antagonist of the other, they are all parts of one great and naturally harmonious system of human industry, of which a fair encouragement to any part is a benefit to all; and that all invidious and partial encouragement to any part, at the expense of any other part, will prove to be an injury to all. The education proposed will do all that can be done to mark the true line between the natural and healthful encouragement to either interest, and an undue attempt to advance any one, at the expense of the united system, merely producing an unnatural and artificial relation and action, which cannot fail to work disease and injury.

The labours of this Society, and of kindred associations, have done much to inform the minds of our farmers in these collateral branches of knowledge useful to them, and much remains to be done. The science of production claims the first place, and is a wide field, as yet so imperfectly cultivated as to afford little time for collateral labours. To secure a stable and healthful market, and to learn how to retain and improve it, also opens an extensive field for the mental labours and energies of the farmer. Between these objects the relation is intimate and the dependence mutual. The production makes the market, and the market sustains the production. The prospect of a market stimulates to activity in the field of production, and the fruits of that activity urge the mind to make the prospect real. Success in both contributes to the health and vigor and prosperity of agriculture, and of that prosperity commerce and manufactures cannot fail largely to partake.

All are willing to promote the cause of agriculture in our State and country. Most are ready to lend an active co-operation, and all are cheerful to see accomplished any valuable improvement in this great branch of productive industry. The difficulty hitherto has been in adopting any general plan to effect this desirable object. Hence, most usually, when the public mind has been awakened to the subject, arbitrary, and in many cases visionary experiments have been introduced, based upon no philosophical investigation of cause and effect, but upon some accidental trial, by a single individual, of some novel mode of culture, which, under the circumstances attending the experiment, has met with success. This single experiment, without an inquiry into, or a knowledge of the cause which, in the given case, has secured the successful result, is at once recommended as an infallible rule of husbandry. The publication and dissemination of detached experiments of this character, for a long period, constituted the most material additions to the stock of literary information connected with agriculture, supplied to our farmers; while many of the experiments were too intricate and complicated to be reduced to practice with any certainty of accuracy, and others were so expensive that the most perfect success would not warrant the outlay. Unsuccessful attempts to follow the directions given for making these expe-

riments, brought what came to be denominated "book farming," into great disrepute with the industrious, frugal and successful farmers of the country, and excited a jealousy of, and a prejudice against this description of information upon agricultural subjects, which it has cost years of patient and unceasing effort in any measure to allay, and which are not yet removed.

In the mean time geological research, heretofore principally confined to investigations into the mineral kingdom proper, has been extended to its legitimate office, and has brought within its examinations the formation of the various soils, and their minute constituent parts. Chemistry has commenced where geology closed, and by a careful analysis of these constituents of the various soils, of the principal agricultural products, and of the usual manures, is labouring to establish upon philosophical principles, the true relations between the soil and the manure to be applied, and between both and the crop to be planted and produced. It is seeking out, with rapid success, the appropriate food of the various vegetables cultivated by the farmer, the soils and manures in which the food for each is found, and the way in which it may be most successfully administered. So with the food of the domestic animals, and the most economical manner of feeding it.

These investigations are the reverse of the former system of arbitrary experiments. There a result was made to justify the arbitrary means adopted to produce it. Here causes are ascertained, and being so ascertained, are relied upon to produce their natural effect, which effect is the result sought.

The importance of this great subject is effectually arousing the attention of the literary and scientific men of the country, and the success already experienced is drawing to these researches minds qualified for the labour, and energies equal to its rapid advancement. The progress made is bringing together the unsettled mind of the country, and producing the very general impression that the time has arrived when the foundations of a systematic, practical agricultural education should be laid, and the superstructure commenced.

It is universally conceded that agriculture has shared but lightly in the fostering care and government patronage which have been liberally extended to commerce and manufactures, nor is it believed that additional public expenditure is necessary to enable the State to do all that can reasonably be required of it, to accomplish this great object. Our educational funds are rich, and the colleges, academies, and common schools of the State share liberally in the distributions from them, while a Normal School, for the education of teachers, instituted at the seat of government, is also mainly supported from these funds. These institutions present the organization, through which, perhaps better than through any independent channel, this instruction can be universally disseminated among the agricultural population of the State. The annual additions to the school district libraries may be made with reference to this branch of education, and thus place within the reach of all the discoveries as they progress, and the rules of husbandry deduced from them, as they shall be settled and given to the public from the pens of the competent professors engaged in pursuing the researches.

This Society, and like associations, may, through appropriate committees, their corresponding secretaries, public spirited commercial men, and otherwise, collect and embody in their transactions, facts and information respecting the markets, foreign and domestic; the present and probable supply of agricultural products; the mode and manner of presenting the principal productions in the various markets in the most acceptable form; the state and prospects of trade at home and abroad, and the changes present and prospective in the commercial policy of our own and other countries, with the probable influences upon the agricultural market. The commercial and agricultural press will doubtless come powerfully to the aid of the associations, in all efforts of this character, and having these great objects in view.

In this way the foundation may be gradually laid, and the materials collected for the commencement of those agricultural studies, which time and application, with the constant evidence of their utility in practice, would ripen into a system, to be engrafted upon the course of regular studies pursued in the colleges, academies, and common schools, and made a branch of the studies of the male classes in the Normal School, placed under the superintendence of an instructor selected for the purpose, and qualified to prepare his classes for teaching the studies in the common schools of the State.

Thus a generation of farmers would soon come forward, well educated in the great and essential principles of agricultural production; in the true relations existing between agriculture, commerce and manufactures, and in the adaptation and preparation of their products for the agricultural markets. Such farmers, with the continued aid

of the schools in which they were taught, would become the best manual labour instructors for their successors.

The passage of time reminds me that I am extending these remarks beyond the proprieties of the occasion and the patience of my audience. A single reflection shall close them.

However confidently the opinion may be entertained that other circumstances and relations might present a prospect for the agriculture of our State and country more stable, independent and flattering, certain it is, that the future here opened is full of cheering promise. We see in it the strongest possible security for our beloved country, through an indefinite period, against the scourge of famine. Our varied soil and climate and agriculture double this security, as the disease and failure of any one crop will not, as a necessary consequence, reduce any class of our population to an exposure to death from hunger. We see also, in addition to feeding ourselves, that our surplus is almost, if not altogether, sufficient, if faithfully and prudently applied, even now to drive famine from the length and breadth of Europe. And that it is in our power, by faithful mental and physical application, soon to make it equal to the expulsion of hunger from the commercial world. We see that, dependent upon the commercial markets, our agriculture may bring upon our country a high degree of prosperity, and enable us, when extraordinary occasions shall call for its exercise, to practice a national benevolence as grateful to the hearts of the humane as to the wants of the destitute. And we see that by the wider diffusion and more secure establishment of a successful agriculture among our citizens, as a permanent employment, we are laying broader and deeper the foundations of our free institutions, the pride and glory of our country, and prized by its freemen as their richest earthly blessing; the history of all civil government, confirmed by the experience of this republic, furnishing demonstrative proof that a well educated, industrious, and independent yeomanry, are the safest repository of freedom and free institutions.

A New Remedy for the Curculio.

Sir,—I made one of those accidental discoveries this season, which often prove more valuable than the results of a carefully conducted series of experiments.

This is no less than a preventive to the attacks of that most unconquerable enemy to all smooth stone fruit—*the Curculio.*

I have long been so troubled with this insect, that I have considered the plum tree of little value to me.

This season, wishing to stimulate a couple of old plum trees, which stood among others in my fruit garden, I directed my gardener to place round each tree a couple of barrowfuls of fresh horse manure from the stable. This was accordingly laid on the surface of the ground, and as work was rather pressing at the time, it was suffered, though rather strong in ammonia, to lie thus for a fortnight. I think it was put about the trees just as the fruit began to swell, and before it became as large as peas. The result is, that these two trees are bearing a good crop of fruit, while every other plum tree in my garden has, as usual, been stung, and dropped all its fruit. There was no punctures, or scarcely any, to be found on the fruits of these two trees.

I understand from this, that the pungent fumes of the fresh stable manure, are so offensive to the curculio, that it avoids the trees under which it is placed. If this, on repetition, proves to be the case, we have, I think, a weapon against the depredator; for though the effect of the application is not the most agreeable one in a neat fruit or kitchen garden, yet no one would hesitate to resort to it, annually, if the curculio can be driven away by such means.

Yours,

A Subscriber.

Philadelphia, Aug. 10th, 1847.

[This is interesting, and we have some corroborative evidence. This season being one when insects of all kinds are unusually abundant, we have ourselves suffered somewhat from the attacks of the curculio, though not to such an extent as to prevent our having a moderate crop of plums, apricots, etc. But we observed some time ago, with some surprise, that upon a couple of large nectarine trees, growing directly against a fence which shuts in our stable yard, not a single fruit was punctured by the curculio, though other nectarine trees, sixty or eighty feet distant, did not escape. We attributed it at the time to the fumes from the litter thrown daily into the yard. Since our correspondent's experience, which is more direct, would appear to confirm the opinion, it will, as he suggests, be well to make a more extensive trial of the effect of a direct application next season.—*Ed. Horticulturist.*]

The Oswego Times says that on the 16th there were ground, bolted, packed and shipped, at the flouring mills of H. Fitzhugh & Co., in that village, 814 barrels superfine flour, with six runs of stones only in motion.

Sewage Manure,

In reference to its use for Agricultural purposes.

There is no subject, perhaps, within the memory of man, connected with the proceedings of the British legislature, that has developed more important matter for national reflection and practical operation, than the facts elicited by the Health of Towns' Commission—an inquiry which, while it has made us acquainted with the most appalling evidence of the diseases of humanity consequent upon the absence of municipal precautions, has also pointed out the means by which the calamity may be in future permanently averted; those means, too, having not only the advantage of eradicating what has been hitherto so fatally noxious to human health, but at the same time—as has been more obviously shown by a subsequent inquiry—of providing a new agent for augmenting the productions essential to the sustentation of man. In a word, more commodious and sanatory dwellings for the labouring poor, improved ventilation, and an extended system of sewage, have been the judicious recommendations of these respective investigations.

It is in reference to the latter—namely, sewage, and its invaluable properties for husbandry purposes—that a few useful hints may be brought under the notice of agriculturists; for at no period could they be more appropriately made known than the present, when the peculiar position of the British farmer, and the direful necessities of millions—through a visitation of Providence,—alike claim the sympathy and co-operative suggestions of the community at large.

It is not a little remarkable that while the system of agriculture of this island is admitted to be transcendently superior to that of any other country, one of the most valuable agencies for stimulating the produce of the soil should have been at all times so little regarded by the English cultivator. The collection of manure in other countries, and that too in a manner totally different from anything ever adopted in this country, has for ages constituted a prevalent and most lucrative pursuit. In China, for instance, its collection is an object of so much attention that a prodigious number of old men, women, and children are, we are told, constantly employed about the streets, public roads, and banks of canals and rivers, with baskets tied before them, and holding in their hands wooden rakes to pick up the dung of animals, and offal of any kind that may answer the purpose of manure. In various parts of a farm, and near the paths and roads, large earthen vessels are buried to the edge in the ground for the accommodation of the labourer or passenger who may have occasion to use them. In small retiring-houses, built also upon the brink of the roads, and in the neighbourhood of villages, reservoirs are constructed of compact materials, to prevent the absorption of whatever they receive. Such a value, in short, is set upon the principal ingredient called *ta-feu*—night soil—for manure, that the oldest and most helpless persons are not deemed wholly useless to the family by which they are supported.

In Belgium, as in China, manure is also an article of trade. The towns let the cleaning of the streets and public retiring places at great rents. In every town, travellers tell us, there are sworn brokers expressly for the purpose of valuing night-soil, the price of the different manures varying from five to twenty-four francs the cart-load of 1,500 lbs. The most efficient applications of the town manure in that country are in the liquid form; it is there applied, not by a water-cart, but by hand labour: a man carries on his back a *dossier*, from which he sheds it out and distributes it.

In Paris the very stuff which in London washes through the streets and under the streets of London into the Thames, is carefully collected. At Meurice's Hotel, early in the morning, may be seen some fifty or sixty large quarter-casks rolled up out of the subterraneous part of that establishment, containing the water of the water-closets, and the water from washing, all of which is sent into the country, and "people—says the conductor of that house—are glad to fetch it away." While in the British metropolis it is a well ascertained fact, so slightly is such an invaluable commodity appreciated, that "three loads a day of dung are dropped in Regent street, between the Quadrant and Oxford-street! and that the amount of actual solid fertilizing manure, deprived of all its liquid diluting substances, that goes into the Thames, is, from the different sewers, actually 725,000 tons a year!" In short, the whole of the towns on the continent make an annual revenue by the cleaning out of cesspools.

To a limited extent, the use of sewage water as an efficacious manure has been availed of by the farmers in this country, particularly in Scotland. At Stirling, the well known Mr. Smith, of Deanston, not very long since instituted a set of experiments which produced the most satisfactory results. Some land was laid out in portions, in rather a sandy loamy soil. First, a division was manured with farm dung and ashes mixed, at the rate of twelve tons per acre,

and at a cost of 48s.; a second portion, with the same compost, giving sixteen tons per acre, and at a cost of 64s.; a third division, with guano, two cwt., costing 16s.; a fourth with guano, four cwt. per acre, at a cost of 32s. Another ridge, similar in extent to the whole of this, was manured with sewer water, at the rate of sixteen tons per acre, and taking it at 3d. per ton the cost would be 4s. The average produce of the whole variety—the different specimens were not ascertained separately—was, with the dung and guano, forty-five bushels per acre of good barley; that with the sewage water averaged forty-two bushels per acre—showing that this small quantity of sixteen tons had the effect of coming very nearly up to the dung and the guano, but showing also that more liquid manure might be given with safety. The sixteen tons were applied twice; all the others were once. The sewage water was taken from a tank, into which it flows from the streets of Stirling. A second experiment was made in raising turnips (the green top yellow) upon a similar soil, to the extent of a quarter of a rood, with two tons of sewage water, equal to thirty-two tons per acre, costing 8s.; the produce twenty-eight tons per statute acre of bulbs—so that a ton of sewage water very nearly raises a ton of turnips. Another experiment was made in 1845, also by Mr. Smith. This was by retaining the night arine of two people during a given time, to enable them to apply it to a rood of land. This being mixed with ashes, to make it applicable in that way, gave 27 tons per acre of turnips; and calculating from that, Mr. S. found that the urine of two persons would suffice for an acre per annum. The remainder of the ground was manured somewhat differently: one with 500 cwt. of guano, the produce 32 tons per acre; one with farm-yard dung (20 tons,) 31 tons per acre; another with ash-dung (30 tons,) 31 tons of bulbs per acre; one with ash-dung alone (12 tons,) 23 tons per acre. Another experiment was made upon a farm at Glasgow, where the liquid manure was put over the land, and the growth continued during the whole of the winter of 1845–6 in a very remarkable way. That season, it is well known, was a great season for grass everywhere; but notwithstanding that, Mr. Smith says it was distinguished before all the grass of the country round, he having seen in the beginning of December, 1845, forty-three Irish bullocks wading to the fetlocks in grass upon some of their fields, and eating it most greedily, while the fields upon the farms in the neighbourhood were perfectly bare.

Mr. Harvey, of Glasgow, also applied sewage water to some wheat land before the crop was sown, and he had a luxuriant crop, more so than the other crops in the neighbourhood, and upon land which was rather cold, backward land.

The following is another instance, showing how the solid manure of farms may be converted into a liquid form. A gentleman near Dumfries has made a tank, into which he has carried all the water from his farmstead and his house, the sewage of his house, and also has put in some solid manure, and has applied water to it; and just with a common pump, which is worked by two men, he was, during the whole of the winter of 1845, irrigating his lawn, which produced the most beautiful flush of fine grass. The operation was performed with the hose-pipe early in the morning, and without emitting any annoying smell. Indeed, when the sewage water is sufficiently diluted to be most beneficial to the earth, there is very little smell.

The result of the comparison between the effects of liquid and solid manure is shown in the following experiment: Mr. Barber, of Muirdroachwood, had twenty-seven acres of land before his house, and the land was so poor that it originally only fed two cows: he had forty cows and four horses in his stable close to his house. He put the dung of forty cows into a tank, and passed a rill of water through the tank, and irrigated twenty-two acres. With the miscellaneous refuse of his house, the scullery, he irrigated five acres. The produce was so large that on that same plot he has been enabled to feed the forty cows and his four horses.

Another very important fact is also deserving of mention. At Edinburgh, where sewage water is also very extensively used, land which formerly let near the sea, sandy land at not more than half a crown an acre, and from that to five shillings, has been let regularly for many years at £20 an acre.

Such are some of the results of the application of sewage manure by practical agriculturists in Scotland. Nor are there wanting similar instances by others south of the Tweed. Mr. Dixon, the well known horse dealer, by the application of liquid manure—in this case urine and water, which is very similar to the sewage water—has kept 100 horses—as far as grass was required—from the Italian rye-grass grown upon four acres. The water is collected from the stables by small covered drains, and conveyed into a tank in the yard. Mr. Dixon, in his evidence before the Parliamentary Committee last session, says:—"I have a drain down the centre of the stall, connected with the stink-trap, before it is carried away into the urine

tank; but I have from time to time discovered the value of the urine to be so great that I have altered my mode of drainage, to catch more forcibly all its power with it; because the urine contains various descriptions of food, the life-restoring principle, which is the ammonia. Ammonia revives us when we have lost blood, and it does the same to the plant. The salt is the life-sustaining principle, and we lose both these when we allow the straw, which contains lime, to evaporate the liquid. I have endeavoured, as I have discovered the value of urine as gold among the metals, to catch it immediately it falls, and catch the whole of it with all its power." Mr. D. added, that in his stables each horse would produce three gallons of urine in a day, and eleven gallons of urine he deemed sufficient to manure one acre of grass.

For the irrigation of meadows sewage manure has also been applied with similar efficacy. Mr. Magnay, a farmer and land agent in Yorkshire, has practised the use of sewer water extensively in irrigation, and has laid out considerable tracts of land in Cumberland for that purpose. "My attention," he says, "was first drawn to the subject from the circumstance of a great quantity of water flowing through a village which I considered of value: I applied it to about twenty acres of meadow, which I increased to four-fifths of the produce which had been previously obtained from it. The most advantageous way of applying it was by a level gutter, laying it out in levels so as to flow over all points of the level alike, passing over the plane at a distance of about twenty-one yards, and the re-collecting it and carrying it to a further level down again."

We believe one of our most intelligent and experienced Essex farmers, Mr. Baker, of Writtle, entertains doubts as to the preference of liquid manure over solid manure, by reason of the expense of carriage, if conveyed any distance by water-carts. As this opinion may probably be held by others, it may be useful to give the results of Mr. Edwin Chadwick's inquiries, at home and abroad, into the applications of liquid manures:

"I obtained," says Mr. C., "an account of the irrigations with the refuse of Milan—which is given in the Report of the Health of Towns' Commissioners,—and in company with Dr. Arnott I visited the irrigated meadows near Edinburgh. I also visited the Clipstone water-meadows, formed by the Duke of Portland, near the town of Mansfield. From the information collected in this stage of the inquiry, I conceived the conclusion established, that there are no means of applying manure so cheaply and productively as in the liquid form. Some inquiries as to the expense of cleansing streets by watering by the hose, as at Philadelphia, where they have a constant supply of water, instead of by the watering-cart, showed that two men, when pipes were properly fixed, might water an extent of street equal to nearly twenty acres per diem. It suggested itself to me that this instrument might be made the means of achieving what was wanted for the distribution of liquid manures. In the summer of 1842 I was staying with a friend—Mr. Thomson, of Clitheroe, where Dr. Lyon Playfair was also staying. Mr. Thomson has extensive print-works, where he employs about 1,000 persons, and from the works has much liquid manure. I then advised the application of this manure by means of the hose. So far as I am aware, this was the first suggestion and experiment of the kind. The only modes of applying liquid manure then in use were by the method of irrigation, by the water-cart, or by hand. The land adjacent to Mr. Thomson's works was a stiff clay. I advised that it should be previously drained, and that Mr. Smith, of Deanston, should be consulted as to the drainage, and on the mechanical appliances for applying the refuse. Mr. Smith very soon entered into my views on this subject. The drainage was carried out as he recommended. Mr. Henry Thomson, jr., who took great interest in the subject, carried out the first experiment of the application of the refuse by the hose, which appears to me to have been completely successful. In another place in Lancashire I advised a friend to apply the liquid refuse by means of the hose, and to engage Mr. Smith to carry out the preparatory work of land-drainage. Mr. Thomson pumped up the sewage water from a well or shaft, into a tank made at the top of a field about 80 feet above the rest of the farm. He found that under that 80 feet pressure, by means of the hose, with the labour of two men, one to remove the hose, and another to direct the nozzle, they could distribute about 2,000 gallons of liquid manure in an hour (per acre). The important result was this: that it was to be accomplished by the labour of two men; and suppose we give 2½d. or 3d. an hour, that delivery of the 2,000 gallons was accomplished for 6d. They tried the water-cart—this was on land immediately adjacent to the farm;—the water-cart, and expense of delivery of the same quantity by that was, I think, about 5s.; the expense of leading and spreading stable-dung was about 11s. That was about the relative mechanical cost: 6d. for the de-

livery by the hose; 5s. by the water-cart; 11s. or 12s. in the distribution of stable manure." There is this great disadvantage also (adds Mr. C.) in favour of the hose, though you cannot give an estimate in money value as to the relative amounts—that in the distribution by the water-carts there is the poaching of the land by the weight of the cart and hose, and probably the damage of which would be more than 5s., and, of course, still greater damage in the case of the cartage of the heavier produce of stable manure. Mr. Chadwick subsequently says: "I think these 2,000 gallons of sewer water were found equal to about three cwt. of guano, and about fifteen tons of stable manure. But there was another important point which was established beyond a doubt, which was, that the friction through the hose, for a considerable length, was much less than we anticipated; for instance, we used half a mile of hose, and carrying it on the surface, over furrows, and through a ditch, and over a hedge, I think at the end of 800 yards it gave out a jet something, as near as I could judge, of 40 feet, nearly half the height due to the pressure. These experiments appeared to establish the fact that the hose, in many circumstances, for the delivery of a given quantity of water, even considering it as a means for the distribution of simple water, would have been cheaper than the water meadow itself; and you have the advantage, also, with that, of being able to apply the liquid manure to arable cultivation. With the water-meadow you only apply it to grass land. There are several gentlemen now who, have recommended this process of distribution by the hose, who are now applying it."

The experiments made by horticulturists have also been equally successful. Mr. Pince, a very able horticulturist near Exeter, applies the liquid manure twice a week; and with one of plain water, as he expresses it, in the interval between each watering with the liquid manure, he gets rid of fibrous matter; and to use his own expression, "I give this water with the manure in it so clear, that if you were not to know what it was, you would not object to drink it." Mr. Knight, the horticulturist of Chelsea, is also of opinion, from the successful experiments he has made, that "farm-yard manure will not be much regarded after a few years; people will give attention to the preparation of manure in a liquid state." And another authority, which we have already quoted more than once—Mr. Smith, of Deanston—says, "I have no doubt that when farmers come to know better the fact and advantages of using this liquid, they will make their dungsteads in covered tanks, and fill their tanks with the liquid, and mix it with their manure."

The experience of the Duke of Portland and others discloses also another curious fact, namely, that the liquid manure is equally efficacious during frost as at other periods.

Here, then, we bring the subject to a close. Enough of practical experience has been brought forward to show the vast benefit that cannot fail to accrue by the general application of this new species of manure to both tillage and grass lands; and no question is more deserving of a deliberate discussion by those useful institutions, the farmers' clubs, than the information that may be elicited by such of their members as have found their account in its adoption.—*Farmers' Magazine.*

How to treat Lard.—The trying of lard is an important branch of economy, requiring no little care and some direct information. Water, be it remembered, should never be made use of in this process, since it cooks the fat and makes it soft and liable to become speedily rancid. Put a lump of fat into a pot, and then stand the pot alongside of the fire, gathering round it a few embers; let a little of the fat try out, after which put the fat over the fire; with such precaution there is no danger of the lard scorching and no need of water, but the lard, when fully cold, will be found quite firm and solid, which cannot be the case if water be made use of in trying out.—*Scientific American.*

It should be kept well stirred—and salt is not essential, though a little will do no harm.

Cold Bed-rooms.—A person accustomed to undress in a room without a fire, and to seek repose in a cold bed, will not experience the least inconvenience, even in the severest weather. The natural heat of his body will very speedily render him even more comfortably warm than the individual who sleeps in a heated apartment, and in a bed thus artificially warmed, and who will be extremely liable to a sensation of chilliness as soon as the artificial heat is dissipated. But this is not all—the constitution of the former will be rendered more robust, and far less susceptible to the influence of atmospherical vicissitudes than that of the latter.—*Journal of Health.*

From the Horticulturist.

On Preserving Grapes for Winter Use.

Dear Sir,—The Isabella and Catawba grape vines are among the most valuable fruit trees known to Americans; for I am inclined to doubt greatly, if any other tree will bear so large and so regular a crop as they do, in all soils and in all sections of the country, except the upper part of New England, where the climate is too cold for them.

They have been multiplied within the last ten years so much, in some of the Atlantic States, that there is now hardly a farmer's garden without one or more of these vines. In many farmers' door-yards I have noticed, with much pleasure, the Isabella grape, trained over a trellis, in front of the kitchen or dairy, so as to make a cheap or very ornamental kind of verandah, such as you may see in Italy.

There are but few, however, of those who raise this prolific grape, who are aware how much the season in which ripe grapes are fit for the table, may be prolonged by a little care and management. Indeed, for my own part, I consider the case with which these two grapes may be kept for winter use to be one of the strongest recommendations to their culture.

I will, if you will allow me, detail two modes of preserving these native grapes, that I have, for three years past, practised with success. They are, no doubt, familiar to many of your readers, but as I very seldom meet with this pleasant fruit at any of my neighbors' houses in winter, I conclude that it will also be new to many others.

At my farm, a few miles from the city, I have an ice-house well constructed, which keeps a supply of ice through the whole year. In this I practice one mode of preserving grapes. This mode is applied to those which I wish for more immediate use, say from the season of frosts till near Christmas.

I have, in this ice-house, a series of open shelves, made of thin and narrow strips of pine, so as to form slender lattices. As soon as there is danger of a frost which might injure the grape, (in general early in October,) I have the grapes for this purpose carefully picked, and laid in single layers on these lattice shelves in the ice-house. There the temperature is so low and regular, that no perceptible change takes place for a long time, and I am therefore, able to supply my table every day with grapes, as fresh, to all appearance, as when picked, for a month or six weeks after they are usually to be had in market.

The second mode is calculated to preserve them for a longer time. By its means, I usually have a good supply from Christmas to March, and have once or twice kept them quite sound till April.

It is very simple. The grapes should be gathered a little before full maturity—say the last of September here. A fine windy day should be chosen, and the fruit should be picked and packed away, quite dry, as upon this depends their keeping well. You should be provided with a proper number of small boxes, holding about a peck each, grape jars, or champagne baskets—the latter answer the purpose well, if lined loosely with paper before using them. I put a layer of cotton in the bottom, and then a layer of grapes, and so alternately till the box is full; I then cover with a layer of cotton, and fasten the cover down with nails or otherwise.

I do not find it best to endeavor to exclude the air entirely. Decay takes place sooner when that is done. For the same reason I have found it better to choose *small* boxes, such as may be opened every week, as wanted for use, rather than larger ones.

As it is considered by my family no mean addition to the dessert, these grapes in abundance in winter, I have no doubt there are numerous readers of the Horticulturist who will put this simple process of preserving them into practice. I ought to add, before closing my letter, that the boxes should be kept in a dry airy place, free from frost.

Your obedient, W. Williams.

New York, October 11, 1847.

Prospects for New-Settlers in Eastern Virginia.

To the Editor of the Farmers' Cabinet:

Respected Friend,—In compliance with thy request, I will now endeavor to give some account of what I saw in my late journey to the eastern and southern portions of Virginia. After spending nearly a whole month, in viewing various neighbourhoods, several of them for the first time, and receiving every where the greatest kindness and hospitality, and every facility that could be desired,—I am more than ever convinced, that the prospects for new settlers in eastern Virginia, described in my former essays, have not been overrated. The appearance of the country generally, and the crops of corn especially, would convince the most sceptical, of the capacity of the soil for improvement, and high production, with the most tolerable husbandry. Nothing is needed but good management, to make the products equal, in every respect, to the best portions of New Jersey and Pennsylvania. If our people would but make a careful examination of this region, and especially the counties of Prince George, Surry, and Charles City,

adjacent to the noble James' River, which divides the latter from the two former—inspect the numberless deposits of rich calcareous marl—the effects of this cheap and most excellent fertilizer, where it has been applied to the soil—the facilities for reaching, with the greatest ease and convenience, all our northern markets, as well as all the world besides—the great abundance of fine timber, and wood, which find a ready sale on the banks of the river,—and the delightful climate, a just medium between the northern and southern extremes of our extended country,—I believe they could scarcely fail to give it the preference, over every other portion of the United States. But it is impossible to form a correct estimate, without a patient and careful examination—a single locality may be seen in a shorter time; but where so much has been abused and neglected, and presents so forbidding and discouraging a prospect at the first glance,—time must be taken to view and examine some bright spots, where the proprietors have with enlightened views, and most praiseworthy perseverance, departed from the habits which have heretofore prevailed, and applied the means, which almost every where are on the farms in the greatest abundance, to renew and increase the fertility of the soil.

One of the most gratifying incidents of my life, was a visit to Beech Wood, at Coggins' Point, in Prince George, the residence of Edmund Ruffin, Jr., to meet there his father, the author of the "Essay on Calcareous Manures," &c., late editor of the "Farmer's Register." works which will ensure him the gratitude and veneration of every enlightened agriculturalist, as long as works on agriculture remain to be read. To ride and walk with him, over the scenes of his early and successful experiments,—to visit with him the very marl banks, from which his first experiments were made; and to listen to his remarks, and observations, the result of so many years of the most persevering and indefatigable labour and study, was indeed most gratifying and instructive. Here, the enquirer after a knowledge of the action of calcareous manures on soils, may have all demonstrated to his satisfaction—and if he will see, can no longer doubt the capacity of the soil of this region for the highest productiveness, by a judicious application of means which are abundantly supplied, in almost every farm in this region.

Within a short distance of Coggins' Point, I visited many farms, of 250 to 600 acres each, mostly with good buildings, and on, or very near navigation, with marl of good quality, finely watered, well timbered, and producing now fair crops, which can be purchased at prices varying from $5 to $10 per acre; the terms of payment as easy as could be desired in most instances. In the same region, lands can be had without improvement, at much lower prices; and in one instance, a few miles from the river, one tract of 100 acres was shown, which can be had for $1 per acre. Here, I think, is one of the finest places for the settlement of a colony of northern farmers, that I have seen—in a space of a few miles, enough land may be had, for many families,—and I may remark here, that in the latter part of the 8th month, I found the people generally, throughout this region, in the enjoyment of health quite as good, and I think better, than in Burlington county, when I left home; and although every one agreed that the weather was more oppressive than it had been at any time previously, during the summer, I did not find the mercury above 85°; and I was careful to observe the temperature. At home at the same time it was often above 90°.

There are several other princely estates on the river which ought to be visited, as Evergreen, a little below City Point, the residence of Capt. H. H. Cocke. Florida Hundred, the residence of J. Wilcox, Upper and Lower Brandon, &c., all in Prince George, and Shirley, the residence of H. Carter,—Berkley, the birth-place of Gen. Harrison, Westover, the seat of Col. Bird, now the residence of J. Seldon, in Charles City Co.; several of these my time would not allow me to visit, but their reputation for skilful management and high productiveness, is well established.

After again partaking of the generous hospitality of my excellent friend R. B. Bolling, during most of the time I remained about Petersburg, he was so kind as to accompany me again to his noble estate at Sandy Point. Although this estate has been several times noticed in the Cabinet, I shall, for reasons which may appear more justifiable hereafter, attempt to give a more full description than has heretofore appeared, though it would require many pages to do it full justice. This estate is situated at the junction of the Chickahoming with the James River, at the eastern end of Charles City Co., Va., about half way from Richmond at the head of the tide, to Old Point Comfort, where the latter river enters the Chesapeake Bay. It contains over 7000 acres of land, of excellent neutral "mulatto" soil—considered in the "Essay on Calcareous Manures," as the best quality for agricultural purposes generally; it has a river front of near twelve miles—the river banks are high with a beautiful clean beach, and no marsh or wet land worth naming—affording many most delightful si-

tuations for residences. The river is navigable for the la gest ships and a full mile in width, abounding in fine fish, which can be taken all the year; and in winter, wild geese, ducks, &c., are there in great numbers—in the forests, deer, wild turkies, and partriges, are very plenty. Steamboats pass daily up and down the river between Richmond and Petersburg and Norfolk and Old Point, where they connect with the boats to Baltimore and the north—stopping at Sandy Point for passengers or produce. A person can leave this place about noon, and be in Richmond, Petersburg, Norfolk, or Old Point the same afternoon, or in Baltimore by sunrise the next morning, and in Philadelphia five or six hours later. The winters are so short and so mild, that cattle and sheep need very little fodder, the grass being scarcely checked in its growth; and ploughing may go on the whole year almost without any interruption. Harvest comes, and fruits ripen nearly a month earlier than in the vicinity of Philadelphia. Peaches and other fruits and vegetables may be sent to Philadelphia and New York a whole month before they are ready in the vicinity of those cities. The markets for grain, are as good there as any where in the northern States.

About 27,000 acres are cultivated,—all having been limed, and enormous crops of clover being turned under with every ploughing for a crop,—it is all in a very high condition. The wheat field the present year contained 910 acres; the crop was excellent, though much damaged by a remarkably late frost, and by cold and wet weather while in bloom. A very recent letter from the proprietor says, "Thus far we have measured 13,500 bushels, and I do not despair of getting 20 bushels per acre." He is extremely modest in his estimates, and from the best information I could get while there, it will considerably exceed that quantity, and equal at least 20,000 bushels. 545 acres are in corn, which is estimated to average 30 bushels per acre. All the other land is in clover of most luxuriant growth, to be ploughed in as a dressing for wheat—a very small portion being cut for the stock. The whole is most judiciously divided by roads, which are skilfully and nicely graded and kept in the most perfect order. The buildings are numerous and excellent, and well distributed: Large barns with stabling for the stock, are located conveniently over the farm—the arrangement of the stables is admirable, and they are kept in the most perfect order—the manure is constantly removed, and the floors kept covered with gypsum, so that the ammonia is immediately absorbed and preserved in the very best way to be useful to the crops, and the manure is not suffered to lie in the yards, but is hauled out and spread over the clover, which immediately covers it, and appropriates all the nutriment. All of the enormous quantities of straw, too, is spread over the clover, which soon finds it way through it, and by covering and keeping it moist, it soon decomposes and assimilates itself again with the soil, to aid in the production of another crop of wheat. Near the river bank, a short distance west of the mansion, is the spacious barn, with steam engine to work a saw-mill for the use of the farm—a mill for grinding corn-meal,—a mill for grinding plaster,—and threshing machines, which are capable of getting out and cleaning 1000 bushels of wheat or corn in a day. This was at work while I was there, and was one of the most gratifying exhibitions I ever witnessed—its average day's work was about 800 bushels, threshed and cleaned, and put into the bins; but I was told that under the most favourable circumstances, over 1000 bushels could be done. The immense field of 910 acres was harvested and secured in eight days, being put up in the field in large shocks. A sufficient number of teams are employed to bring it into the barn, and so arranged that one is always unloading at the door, and another ready to take its place as soon as it is unloaded—thus keeping the machine employed. The threshers are on the second floor, from which the wheat falls into the fans on the floor below, after passing through the fans it is taken by the elevators to the third story, where it is made to pass through screens, and then by machinery into the bins, almost without any assistance from manual labour—it is a beautiful operation, and would alone repay a visit to Sandy Point—the straw is also removed by machinery to a considerable distance, when it is taken up by the women and boys, who are each provided with a cord, with which they enclose a bundle of such size as they find it convenient to carry, and placing it upon their heads, they mount an inclined plane, and deposit it in immense oblong stacks, the size of which would astonish most of our northern farmers. This barn is surmounted by a neat cupola, in which is a clock with four large faces, which can be seen from nearly all parts of the farm, and the bell which strikes the hours regularly can be heard much further. The vane above, in excellent taste, is a finely formed gilded plough.

Over 4000 acres of this estate is in timber of primitive growth, none ever having been cut except for the use of the farm—competent judges estimate eighty cords to the acre, if all were cut into cord wood; but

there is a vast quantity of white oak of very large growth, and of excellent quality for ship timber and plank—and an equal or greater portion of an immense growth of yellow heart pine of the very best quality: many of the trees are from 50 to 75 feet to the first limb, and from two to three feet in diameter; with these are intermixed much hickory, black and red oak, black walnut, &c., &c.

Cord wood is constantly in great demand on the banks of the river, for the steam boats, and for the eastern cities;—large vessels come and take it to Baltimore, Philadelphia, New York, Boston, &c., &c. On the river bank oak wood sells for $2 50 to $2 75 and pine for $2 25 to $2 50 per cord—it is cut and corded in the woods for 25 to 37½ cts. per cord, and it can be put on the landing for 50 to 75 cts. more—making it worth at least $1 25 to $1 50 standing in the woods. The best heart pine lumber is worth from $20 to $30 per M., and the white oak not less in the northern cities, and it can be taken there for $3 to $5 per M. The vessels from the North River coming after wood, bring back lime, which they sell for six and a quarter cents per bushel; the proprietor of this estate has purchased several hundred thousand bushels at this price.

The noble minded and public spirited proprietor, anxious for the regeneration of his native state, and determined to offer the strongest inducements to northern men of enterprising, industrious, and virtuous habits, to come and establish a prosperous and beautiful colony, offers to sell a large portion of the timber land upon this estate to a company who will be actual settlers after it is cleared, upon terms which must be satisfactory to all, who will give the matter a careful examination. He has fully authorised the subscriber, to form such a company—a plan with full details is now in readiness, which will be shown to any one disposed to enter into it, and any other information will be cheerfully given to all who wish to know more of this or any other neighbourhood visited,

SAMUEL S. GRISCOM.

Moorestown, Burlington Co., N. J.,
Tenth mo., 20th, 1847.

PRODUCTIVE LITTLE FARM.—At a late meeting of the New York Farmers' Club, the committee on farms reported that that of Messrs. Cooper, near Bushwic, Long Island, containing thirty acres, was a model for thorough culture and extensive products. They have four men to work it, and occasionally men, women and children to pick and weed. The products the present season are—342 bushels of peas in pod, sold at 75 cents; 1000 bushels of potatoes, sold at 69 cents per bushel; and 500 bushels to dig; 1200 bushels of tomatoes, sold at 50 cents per bushel; 1200 do. of bush beans, sold at 44 cents a bushel; 75 bushels of wheat: and they have growing 4000 poles of lima beans, three acres of corn, one and a half of turnips, one and a half of cabbages, one-twentieth of an acre in cayenne peppers; besides raising hay enough for their stock. That sold has yielded them $2508 75—that on hand is valued at $993 50—making a total of $3498 25 off of thirty acres.

Rye among Wheat to prevent the Fly.

WE are quite inclined to the opinion, that our correspondent below from Ohio, may much more attribute his escape from the fly, while his neighbour was injured by it, to the superior condition of his land, than to the rye among his wheat. Good land, and seed well and timely put in the ground, are among the excellent means of overcoming, if not of preventing the fly.—ED.

To the Editor of the Farmers' Cabinet:

I noticed in your September No. of the Cabinet, an article supposing the "weevil in wheat" had been prevented by sowing a small quantity of rye among the wheat.

I seeded ten acres last fall with Mediterranean, about the 20th of September. There was a small quantity of rye which got into the seed accidentally; about two acres of it were seeded with old wheat, and had considerable more rye in it. This kind falls down before harvest, which is all the fault it has; it is in good repute here.

The soil is a sandy loam, rather inclined to stiffness, with a brittle clay sub-soil; it is in good condition, having been cleared twelve years. I have had it in possession nearly ten, and cultivated it with a four course: wheat, corn, barley, and clover; it was clover pasture, broken in middle of August; I then harrowed twice at an interval of nine days. The seed was shovel-ploughed in. I dunged it for corn, and the last two courses for wheat. I have threshed enough to ascertain the yield will be a little over twenty bushels per acre. The fly or weevil was on it, but not to hurt it much.

My neighbour, on the farm adjoining, broke a clover pasture the latter end of June, ploughed second time just before he seeded it, and harrowed it in. The land is very similar to mine, only not quite so stiff; both fields slope to the north, on the same side of Mill Creek. The kind of wheat was the red chaff bearded. I did not see a single

stalk of rye among it; but the fly, or weevil, had damaged it considerably. I went into the field while they were reaping it, and estimated the crop at eight bushels per acre. The land was much lower in condition than mine; it had clover sown twice in eighteen years; but no dung;—four persons had occupied it in that time. B.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

PHILADELPHIA, ELEVENTH MONTH, 1847.

BOSTON and its vicinity have long been famous for the successful cultivation of the pear. At the annual exhibition of the Massachusetts Horticultural Society in the Ninth month last, R. Manning as usual, "led off" with two hundred and fifty-five sorts, some of which, we learn from Hovey's Magazine, were large and fine. The President of the Society, M. P. Wilder, exhibited one hundred and fifty-nine kinds, many of them entirely new. Hovey & Co. had seventy varieties, more than half of them shown for the first time. Of the grapes exhibited, the Magazine assures us, that the magnificent specimens in the rooms, left little to be desired for further improvement. Numerous other persons brought forward fifty or sixty or eighty varieties of pears, and five and twenty or thirty of grapes. Boston is a great place for the amateur in fruit.

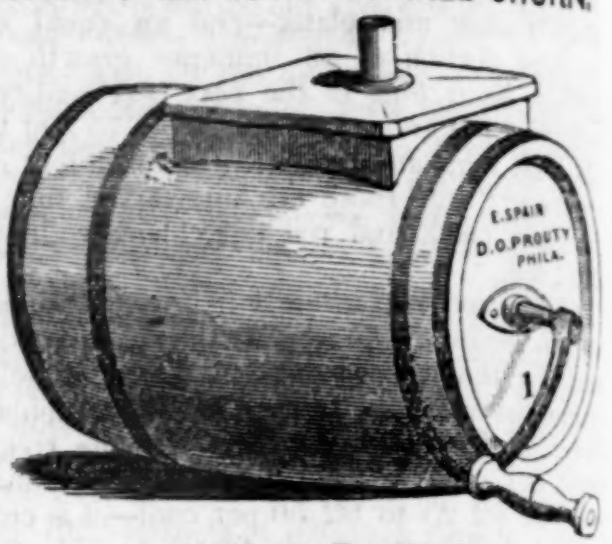
FOREIGN papers assure us, that within the last two years in New South Wales, more than 350,000 cattle and sheep have been slaughtered and boiled up for their tallow.

WE suppose that our correspondent "L," on page 81, of last No., forgot to acknowledge what he should certainly have done, that the statements forwarded were taken from the *American Agriculturist*, one of our numerous excellent agricultural papers.

UPWARDS of 22,000 barrels of apples were imported into this city, during the last month; chiefly from the eastern States and New York.

As frequent enquiries are made by the subscribers to *Colman's Tour*, when the ninth number will probably appear—it is proper to state, that we are unable to give the desired information. When we last heard of our friend he was in Switzerland prosecuting the objects of his journey, and looking closely into its agricultural operations. It was his intention to continue his travels into Italy and France, before making up the matter for his ninth and tenth numbers. These will give his views of the Agriculture of the Continent, and close the work. It has been much longer in hand than was anticipated—but we trust it will not be the less valuable. Without being advised in the matter, we shall look for the two succeeding numbers during the coming winter. As soon as it shall be in our power, our subscribers shall receive them.

SPAIN'S IMPROVED BARREL CHURN.



Premium awarded by the Franklin Institute, 1846.

Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside of the Churn, by simply unscrewing the handle from the dasher, and raising the handle end of the dasher to the square of the hole. The peculiar construction of the dasher agitates the cream in the centre as well as at the sides, giving it a rolling motion, and preventing the cream from revolving with the dasher after it becomes thick; they also gather the butter quicker and better. The tube in the lid is for the purpose of letting the gas escape and admitting the fresh air through the Churn while in operation. After churning the dashers can be removed; the Churn is then clear of all impediments in the way of removing the butter, and of a perfect cleaning. For Sale only by

D. O. PROUTY,

No. 194½ Market Street, below Sixth, Philadelphia.

Nov. 15th—tf.

PREMIUM IMPLIMENTS.

PROUTY'S Improved Machine for Shelling and Screening Corn, and Separating it from the Cob.

For this Machine the Philad'a Agricultural Society awarded their first Premium for Corn Sheller, 1847.

Grant's Patent Premium Fan Mill,

For Chaffing and Screening Wheat, at one operation. Three Silver Medals, and nine First Premiums, have been awarded for the above Mill.

Prouty and Mears' Patent Centre-Draught, Self-Sharpening Ploughs. First Premium awarded for these Ploughs, by the Philadelphia Agricultural Society, 1844, 1845, 1846 and 1847.

Corn and Cob Breakers and Grinders,

Corn Stalk Cutters & Grinders—Sugar Mills—Spain's Improved Barrel Churn, the dashers of which may be taken out to clean. Also, a full assortment of Agricultural Impliments, Manufactured and for Sale by

D. O. PROUTY,

No. 194½ Market Street, below Sixth, Philadelphia.

Nov. 15, 1847.—tf.

KEPHART'S PATENT
Fruit and Vegetable Preserver.

An admirable invention, by which fruits, vegetables, &c., viz. oranges, lemons, apples, pears, peaches, &c.—potatoes, green corn, melons, &c., can be kept as long as desirable with all their natural juices and sweetness. Also, butter, eggs and bacon can be kept throughout the year, fresh and sweet, at an expense not greater than in an ordinary warehouse in the city. A full description will be found in the June number of the Cabinet.

The undersigned having purchased the Patent-right for the United States, except the states of New Jersey, Delaware and Maryland, and the cities of New York and St. Louis, offer for sale Patent rights for the construction of the PRESERVER, by states, counties or individual rights, upon terms that will induce all interested in the preservation of the above named articles, to purchase rights and construct houses.

FLACK, THOMPSON & BROTHER,
Coates Street wharf, near Fairmount.

All communications will receive prompt attention, if addressed either to PETER KEPHART,
Western Hotel, Baltimore, Md.
Or to FLACK, THOMPSON & BROTHER,
Spring Garden P. O. Philadelphia.

July 15th, 1847.—6t.

SEED STORE,
No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1847. tf.

Prince's Catalogues—36th Edition.

WM R. PRINCE & Co., proprietors of the Nurseries at Flushing, L. I., have just published their new Catalogues at an expense of above $1000. The Descriptive Fruit Catalogue is the most complete ever published, and the glands, size and colour of the blossoms of the peaches are given in addition to all other information. Terms $1, post paid, with the application. The *old* edition will be sent *gratis*.

Sept. 15th, 1847. 2t.

TO LET.—A FARM,
Suitable for a Milk and Truck Farm,
Two miles from Camden, N. J.

There is a good proportion of Meadow, and the buildings are in good order. None need apply unless they are able to stock the farm well, and can produce good references. To a satisfactory tenant a lease for several years would be given. Apply at this Office.

11th mo., 15th, 1847.—2t.

Agency for the Purchase & Sale of
IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, swine, poultry, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

April 15th, 1847.

NEW
Horticultural and Agricultural Ware-house,
84 *Chesnut Street below Third. South side.*

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1846. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1847.—1y. R. BUIST.

COAL.

THE subscriber has made an arrangement for a constant supply of superior Lehigh and Schuylkill Coal—carefully prepared for family use, which he will furnish *at the usual cash prices*, on application at the office of the Farmers' Cabinet, where samples of the different kinds and sizes may be seen.

JOSIAH TATUM.

Philadelphia, Seventh month 15th, 1847.

COATES' SEED STORE,
No. 49 Market Street,
FRESH TIMOTHY SEED,
Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GRASS & GARDEN SEEDS,

Of the finest Quality and best Varieties,—Bird Seeds, &c.

JOS. P. H. COATES,
Successor to George M. Coates.

May 15th, 1847.

☞ SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

THE quantity of rain which fell in the 10th month 1847, was ..... 3 in.

Penn. Hospital, 11th mo. 1st.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 11 vols.	9 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
THOMAS' FRUIT CULTURIST,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½
JOHNSON'S DICTIONARY OF MODERN GARDENING,	2 25

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

AFRICAN GUANO.

First quality African Guano, from the island of Ichaboe, warranted genuine. Also a few tons Peruvian

For sale by J. B. A. & S. ALLEN,
No. 7 South Wharves, 2nd Oil Store below Market street.

Philadelphia, March 17th, 1847.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels each, or 35 cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. We are now ready to supply any demand for wheat.

JOSIAH TATUM.

Philada. 8th mo. 16th, 1847.

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THE FARMERS' CABINET,

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It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For eight dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the 12th volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage.

Joseph Rakestraw, Printer.